

CATALYZING THE URBAN SURFACE:

STRATEGIZING SITES ALONG THE HISTORIC SMOKY HILL RIVER CORRIDOR

by

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A REPORT

submitted in partial fulfillment of the requirements for the degree

MASTER OF LANDSCAPE ARCHITECTURE

*Department of Landscape Architecture/Regional Community Planning
College of Architecture, Planning & Design*

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2010

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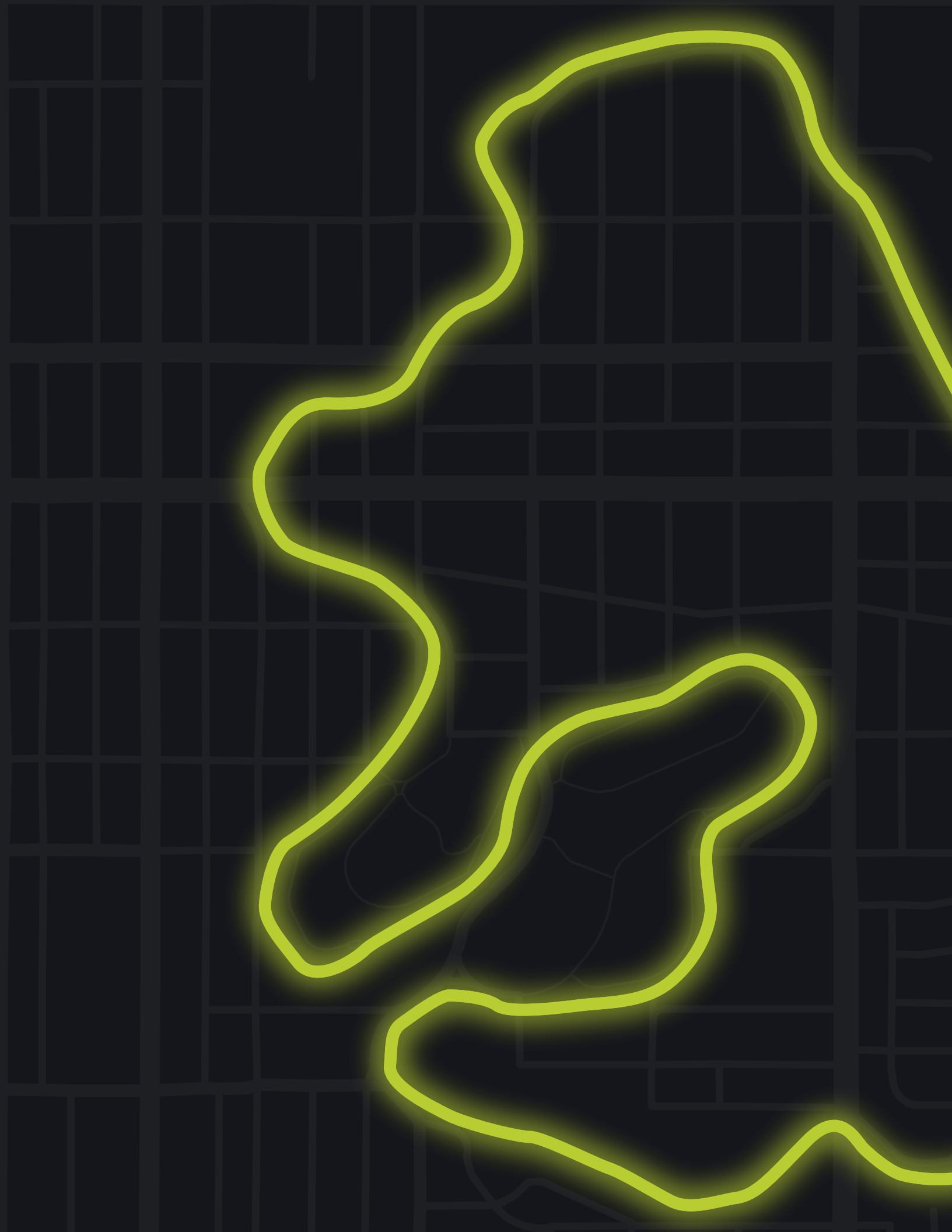
2010

Abstract

The trend of urbanization is escalating on a global scale, in many cases sprawling outward at the expense of decaying urban centers, post industrial infrastructure, and other neglected landscapes. There is a critical need for intelligent, responsive, and resilient urban planning and design. The Smoky Hill River's neglected cutoff channel running through the heart of Salina, Kansas, is exemplary of these phenomena. Although the historic channel operates as an important landscape infrastructural system for stormwater conveyance, it remains largely inactive in terms of its connections to adjacent neighborhoods, cultural significance, and economic driving potential.

Landscape Urbanism, a relatively new realignment in urbanism theory, involves the concept of engaging dynamic urban processes and facilitating or enhancing relationships through design, providing potential remediation to many urban dilemmas. While still speculative and experimental, its application in metropolitan environments has garnered acknowledgment in the design community. Landscape Urbanism's relevance toward micropolitan and small metropolitan cities, however, remains largely unexplored. The relationship between the revitalization of the historic Smoky Hill cutoff and Salina, facilitated by local advocates the Friends of the River, explores the application of Landscape Urbanism theory in smaller urban environs. Through the analysis of precedents exhibiting Landscape Urbanism strategies, the careful inventory of characteristics unique to specific sites along the historic channel, and synthesizing the Friends of the River goals and objectives, applicable strategies that influence design methodology by engaging key urban systems are found and applied. The design of these sites act to "catalyze" adjacent areas through connectivity and enhancing the cultural, environmental, and economic health of the district.

Design implementation at a strategic site catalyzes immediately adjacent districts, followed by the catalysis of the entire channel. In its final state, the historic channel becomes re-integrated into the City of Salina as a vital system, engaging and enhancing the urban field as a whole.



ai miei amici, per il loro supporto eterna



catalyzing the urban surface

strategizing sites along the historic smoky hill river corridor

Kansas State University
College of Architecture, Planning & Design
Department of Landscape Architecture

Master's Report
LAR 700 - Project Programming
December 8, 2009

acknowledgments

To the esteemed faculty of LAR/CP, chiefly Melanie Klein, Dennis Law, Stephanie Rolley, Tim Keane, and Blake Belanger for their guidance, inspiration, and trust throughout the course of this project and my academic career. To Paula Fried and Troy Vancil with the Friends of the River, and Alyssa Gerry, Dean Andrew, and Keith Ganzenmuller with the City of Salina for their invaluable assistance with many aspects this project. And, of course, to my family and friends, for their eternal support throughout life's trials and tribulations.

abstract

The trend of urbanization is escalating on a global scale, in many cases sprawling outward at the expense of decaying urban centers, post industrial infrastructure, and other neglected landscapes. There is a critical need for intelligent, responsive, and resilient urban planning and design. The Smoky Hill River’s neglected cutoff channel running through the heart of Salina, Kansas, is exemplary of these phenomena. Although the historic channel operates as an important landscape infrastructural system for stormwater conveyance, it remains largely inactive in terms of its connections to adjacent neighborhoods, cultural significance, and economic driving potential.

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Design implementation at a strategic site catalyzes immediately adjacent districts, followed by the catalysis of the entire channel. In its final state, the historic channel becomes re-integrated into the City of Salina as a vital system, engaging and enhancing the urban field as a whole.

“The world is a glorious bounty. There is more food than can be eaten if we would limit our numbers to those who can be cherished, there are more beautiful girls than can be dreamed of, more children than we can love, more laughter than can be endured, more wisdom than can be absorbed. Canvas and pigments lie in wait, stone, wood and metal are ready for sculpture, random noise is latent for symphonies, sites are gravid for cities, institutions lie in the wings ready to solve our most intractable problems, parables of moving power remain unformulated and yet, the world is finally unknowable.”

-Ian McHarg, “Design with Nature”

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Smoky Hill Friends of the River

chapter 1: the river

“If we are to successfully co-exist with the river, we must better understand the consequences of our actions on river systems and associated values.”

-Dave Rosgen, “Applied River Morphology”

chapter 1: the river

historical context + current conditions

Salina’s beginning

The city of Salina was originally chartered by the Town Company of Salina, led by Colonel William A Phillips (Cutler, 1883). The Company, consisting of Colonel Phillips, AM Campbell, J Muir, Robert Crawford, and AC Spillman, were granted the charter by the 6th Territorial Legislature of Kansas on March 30, 1858 (Cutler, 1883). The townsite was located within the wide valley formed from the convergence of the Saline, Solomon, and Smoky Hill Rivers, and was prime in terms of its agrarian soils and adequate water sources from the three rivers. Additionally, its location near the Military Frontier road fed, from the east by Fort Riley, readily set up an economic and protective framework for the town (Bramwell, 1969). Trade with the nomadic Native American tribes of the Cheyenne, Arapahoe, Kiowa, and Pawnee helped the townsite establish a lasting presence in the area; in July of 1860 Saline County was organized and on April 14, 1862, Salina

became an official town of Kansas (US Army Corps of Engineers, Kansas City District, 1972b).

Salina’s growth was slow in the beginning. Primarily attributed to the Civil War, settlement was generally discouraged while many of the town and county’s men enlisted (Bramwell, 1969). Manufacturing in the form of grist and saw mills utilized the power of the Smoky Hill, and sustained the slow growth of Salina through the war until 1867 and the arrival of the Kansas Pacific Railroad (US Army Corps of Engineers, Kansas City District, 1972b). The Kansas Pacific was granted nearly half the land in Saline County, parceling the land for rail construction and for homestead sale (Bramwell, 1969). Salina soon flourished greatly from the influx of immigrating settlers and the increased trade opportunities with the railroad, and during the 1880s Salina’s downtown continued to grow dramatically around the Smoky Hill (Ward & Ward, 191?).



figure 1.01. a view of the Smoky Hill River

growth, expansion, and flooding

Salina encountered its first large scale flood event in the year of 1903, which inundated many towns, cities, and areas of northwest and north-central Kansas within the Missouri, Kansas, and Republican River Basins. The magnitude of the flood was attributed to the consistent heavy rainfall the portions of the state received during the month of May; above average rainfall occurred during the first half of the month, saturating the soils. During the second half of the month between May 16th and the 31st, rainfall was daily, resulting in the affected area receiving more than 10 inches of rain (Combs & Perry, 2003).

Salina persevered the damages caused by the flood, and continued to grow and expand, despite subsequent flood events (US Army Corps of Engineers, Kansas City District, 1972b). Following the 1938 Flood Control Act, the construction of the Kanopolis Dam began on the 8th of June, 1946, as “a multi-purpose project with storage allocated for flood control, water supply, water quality and recreation” (US Army Corps of Engineers, Kansas City District, 2009).



figure 1.02. flood levels in Salina after the Great Flood

Schilling Air Force Base and the Flood of 1951

The onset of World War II, concurrent with the aforementioned flood control measures, brought significant expansion to Salina through the construction of the Smoky Hill Air Force Base (Bramwell, 1969). After the War the base fell into disrepair and was closed in 1949, only to be re-opened in 1951 during the Korean War under the new name of the Shilling Air Force Base (Strategic Air Command, 2003). The base would go on to bring Salina a significant increase in population and spurred economic growth (Bramwell, 1969).

1951, however, also brought the most destructive flood Salina has ever experienced (figures 1.02 and 1.03) . Known widely as the Great Flood of 1951, it “primarily affected the Kansas, Marais des Cygnes, Neosho, and Verdigris River Basins in Kansas and the Osage and Missouri River Basins in Missouri”, flooding roughly two million acres of land, damaging or destroying 45,000 homes, and washing away 17 major bridges (Juracek, 2001). Figure 1.04, an isohyetal map of the flood, illustrates the intensity of rainfall during the storm.



figure 1.03. a Salina home during the 1951 high waters

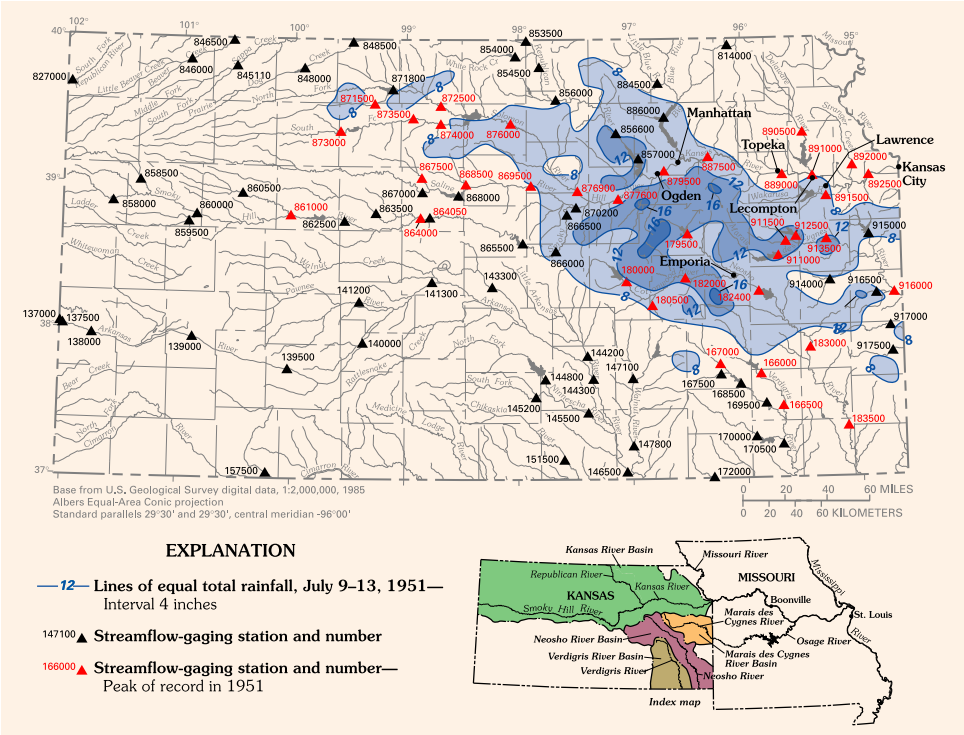


figure 1.04. isohyetal map of the 1951 Flood

Damage estimates across Kansas from October of 1951 capped at \$2.5 billion (Juracek, 2001). In comparison from 1951 dollars to 2010 dollars, this equates to nearly \$20.8 billion, according to the US Bureau of Labor Statistics CPI Inflation Calculator (US Bureau of Labor Statistics, 2009).

Damage to the city was massive. Roughly 50 percent of residential areas equating to “more than 3,000 residences, 122 commercial firms, 2 schools, and 3 churches were inundated”, and around 13,500 people were evacuated from the area (City of Salina, 2006a).

the Salina Flood Protection Project

The wake left by the 1951 flood created the impetus for a citywide flood protection system (City of Salina, 2006a). Planning with the Army Corps of Engineers prior to the beginning of construction in 1957 was extensive for the Salina Flood Protection Project (SFPP), and by 1961 the project was completed (Wilson & Company, 1978). Major components of the Corps’ plan are as follows:

1. Construction of a diversion channel and levee south of Mentor, Kansas, to transport flows from Dry Creek into

- the Smoky Hill River.
2. Realignment of Mulberry and Dry Creeks west of Salina.
3. Partial encirclement of the City with a levee north of Euclid Street.
4. Modification of the river channel with a 1-1/4 mile cutoff channel constructed on the east side of the City near Iron Avenue to bypass the loop of the river passing through the City.
5. Construction of two storm water pumping plants, one located east of Lakewood Park near the levee and the other on Dry Creek northwest of the City (Wilson & Company, 1978).

Figure 1.05 shows the combined system in its regional context, labeled according to the numbered features previously mentioned. The system was designed for a flood flow capacity of 50,000 cfs with a three foot freeboard (Wilson & Company, 1978). The SFPP “cost in excess of \$6,000,000, approximately \$2.3 million in local funds and the balance Federal” (City of Salina, 2006a). According to the US Bureau of Labor Statistics, the 2010 dollar equivalents from 1961 CPIs are \$43.3 billion and \$16.6 billion, respectively (US Bureau of Labor Statistics, 2009).

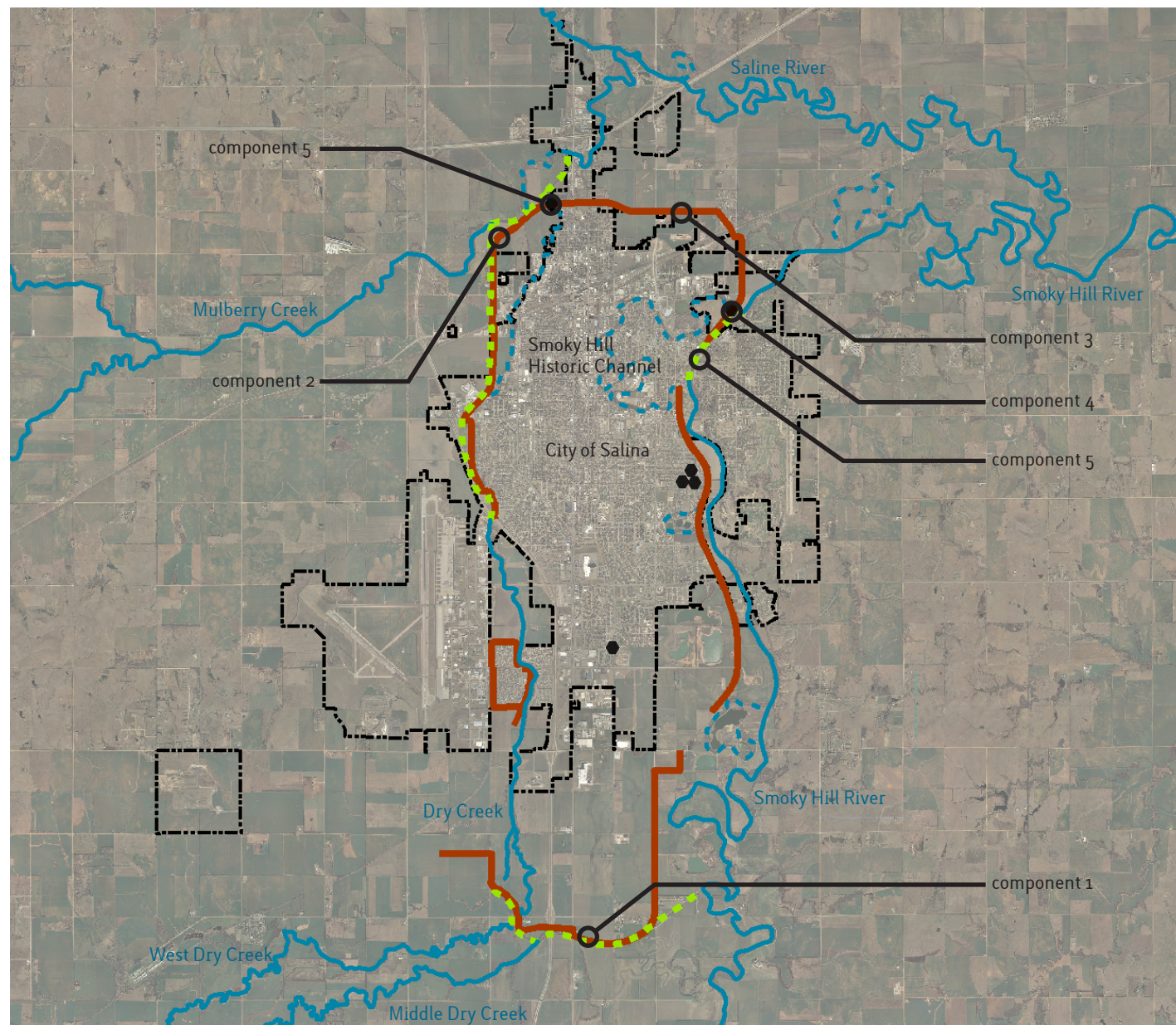
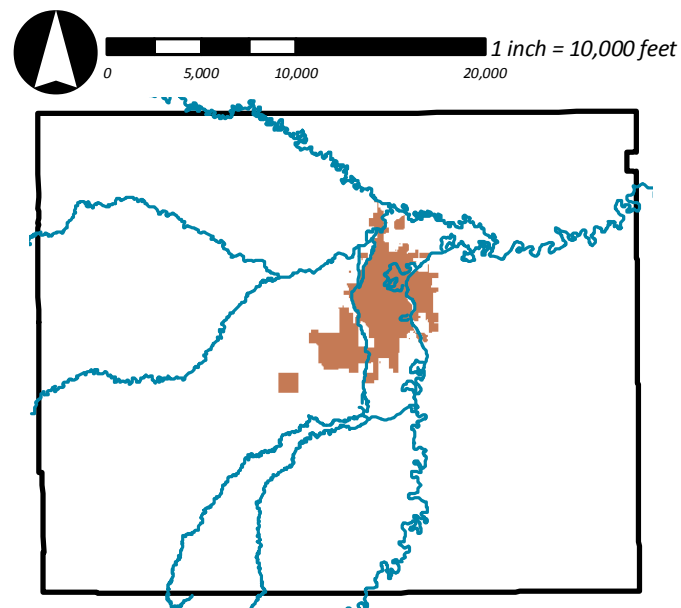


figure 1.05. combined flood protection system

Legend

Channel Type

- Abandoned Channel
- Diversion Channel
- Natural Channel
- Levee
- Storm Pump
- City limits



GIS Data Sources: City of Salina Planning Department, USGS, USEPA, ESRI

lasting effects of flood control

Although the SFPP has managed to protect Salina from the damaging flood potentials of its surrounding rivers and creeks, in doing so it effectively cut off and drastically altered the nature of one of its principal recreational and aesthetical landscapes: the loop of the Smoky Hill River running through the heart of Salina (Wilson & Company, 1978). Recognizing this, the Salina Board of Realtors took on the historic channel as its project under the National Association of Real Estate Board's "Make America Better" program (Wilson & Company, 1978). Wilson & Company, an architecture and engineering firm in Salina, conducted an extensive study of the historic channel in 1979 at the request of the City of Salina. Wilson and Company's study observed that the channel functions (and has continued to function) in three ways:

- "To convey river water from the cutoff channel to the Water Treatment Plant;
- to provide interior storm water drainage and flood protection; and
- to act as a desilting pond for the Water Treatment Plant. About 70% of the total sediment load in the old channel settles out between the inlet and the Water Treatment Plant" (Wilson & Company, 1978).

A little over half of Salina's water supply (1.13 billion gal/yr, 2.13 billion gal/yr total) is drawn from the historic channel of the Smoky Hill at a downtown site (City of Salina, 2006b). Flow into the channel is maintained by a 54-inch conduit running through the levee, allowing a maximum inflow of 100 cfs.

river advocacy

The Wilson and Company 1979 engineering study included numerous design concepts, a recommended plan, details, and cost estimates for proposed beautification and recreation enhancement. Although thorough in its scope and vision, the project never was initiated. Thirty years later, the channel has experienced sediment aggradation and wetland plant encroachment due to the decreased volume of discharge.

In the spring of 2008, Troy Vancil and a group of Salinians formed the interest group "Friends of the River", concerned with the current state of the channel and its future potential as an aesthetic, recreational, and economic amenity to Salina (Stineman, 2008). Their mission for the river renewal is as follows:

"The renewal effort would focus on improving the river in the areas of appearance, flow, its condition as it pertains to the environment, education offerings, recreational activities, health and fitness opportunities and the enhancement of neighborhoods and economic development" (Friends, 2009).

The Friends began talks in the fall 2008 with Denver-based firms Design Studios West (DSW) and Wright Water Engineers (WWE), who have experience working on projects similar in scope to the Friends' vision for the historic channel (Brandes, 2009). On November 11th, the City Commission authorized the Friends to conduct a Public Outreach process and preliminary site study (part of the first phase of DSW and WWE's work) beginning in January of 2009 (Brandes, 2009).

physical context

location + size

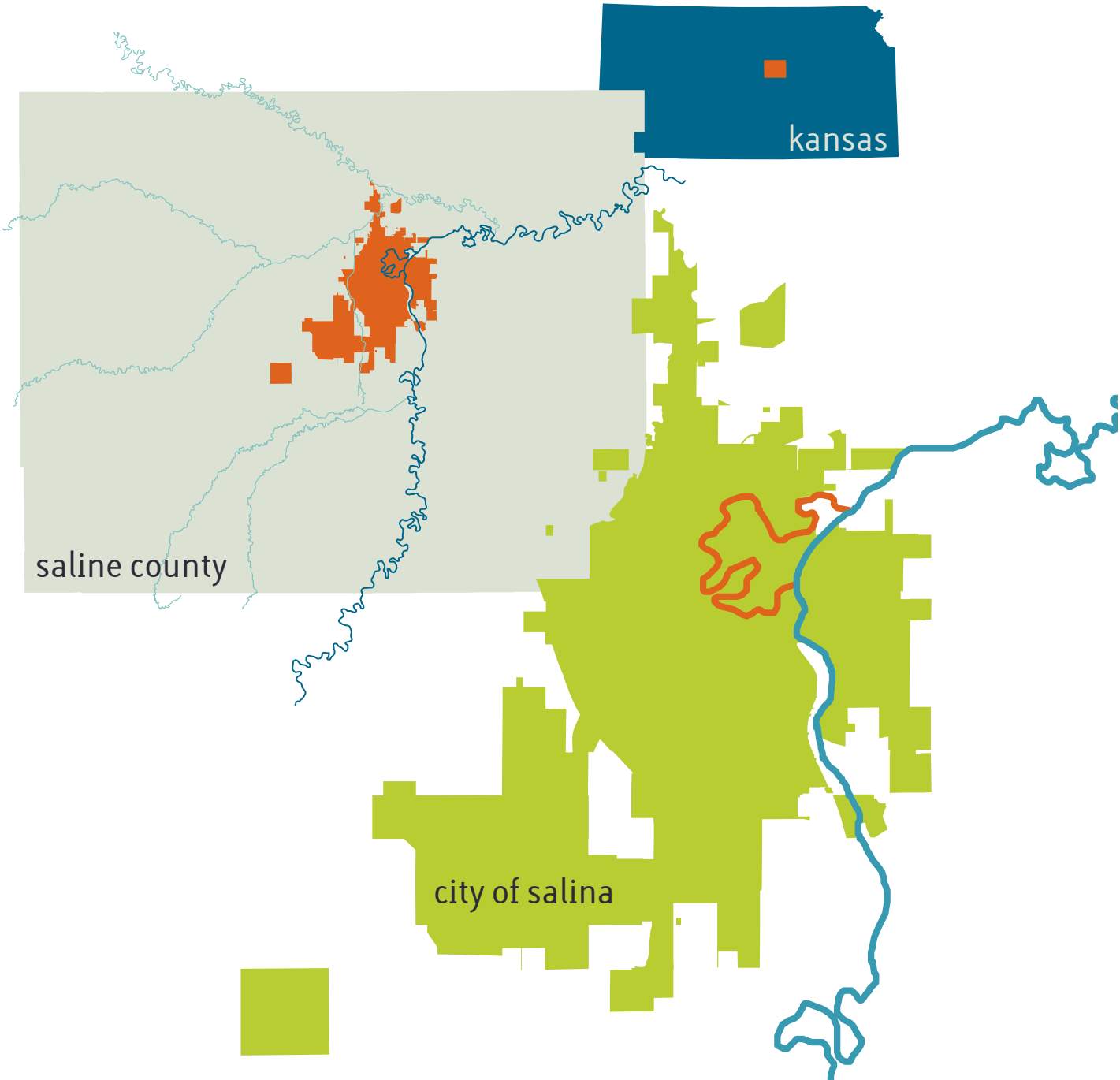


figure 1.06. regional context

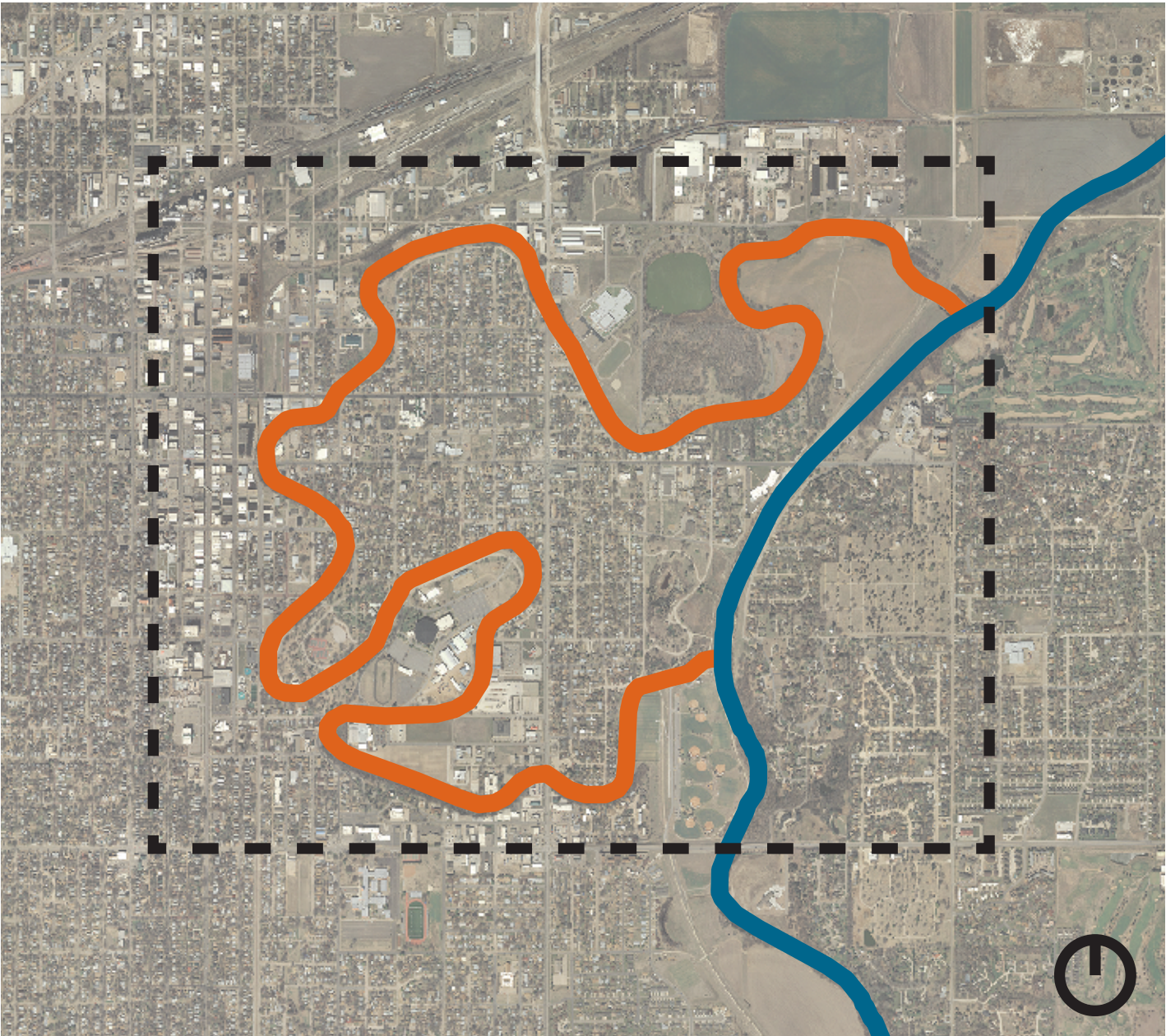


figure 1.07. the Historic Channel of the Smoky Hill within the Salina study area. scale: 1"=2000'-0"

the study area

The historic channel running through the heart of Salina is 36,902 feet, or 6.98 miles in length, while the diversion channel is 6000 feet (1.14 miles). The grade change from inlet point at the diversion channel to its outfall location is 24 feet, yielding an

average slope of .0006%. The project study area, comprising an area that encompasses the historic channel and adjacent sites, is 91,805,000 square feet, or roughly 3.29 square miles.

current conditions and concerns

the smoky hill historic channel

As stated in the previously, the historic channel of the Smoky Hill has undergone significant changes since the implementation of the Salina Flood Protection Project. Diversion of the channel through the bluff Indian Rock, seen in figure 1.09, is the main cause of the natural phenomena experienced. This decrease in flow can also be attributed to the construction of culverts at river-street junctions, where dead vegetation and garbage has a tendency to accumulate and create an unsightly aesthetic, seen in figure 1.10. The decreased flow has led to sediment aggradation in the upper reaches of the channel, which over time, as evidenced by figures 1.11 and 1.12, has caused the encroachment of wetland vegetation along its otherwise accessible banks.



figure 1.08. the Historic Smoky Hill Channel loop



figure 1.10. litter and plant material collecting at the Iron Avenue culvert and inhibiting flow



figure 1.11. beginning stages of wetland plant encroachment along the Smoky Hill



figure 1.09. the constructed diversion channel



figure 1.12. advanced wetland vegetation encroachment within the channel

current conditions and concerns

the city of salina

The effects of the booming growth periods Salina has experienced over time is evident in figures 1.13 through 1.17. Figures 1.13 and 1.14 illustrate the shift of the commercial/retail centers and employment areas from the original downtown area to north and south of Salina. These areas are largely characterized as automobile-dependent with little consideration for pedestrian connectivity

and experience, as evidenced by figure 1.15, which illustrates the intersection of two main arterials of Crawford and Ohio. Indictment of this sprawling nature is of some importance; however, continued growth in this fashion raises concern for the encroachment of Salina’s flood protection system and other drainageways outside of the levee wall, as seen in figures 1.16 and 1.17.



figure 1.15. Crawford/Ohio Street intersection illustrating automobile dependency

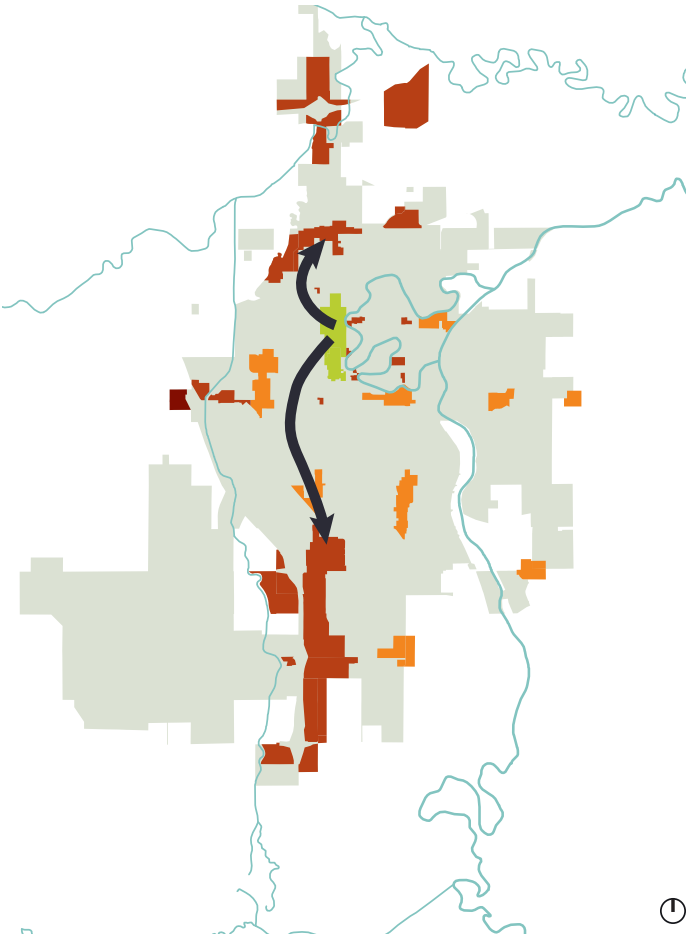


figure 1.13. commercial center shifts

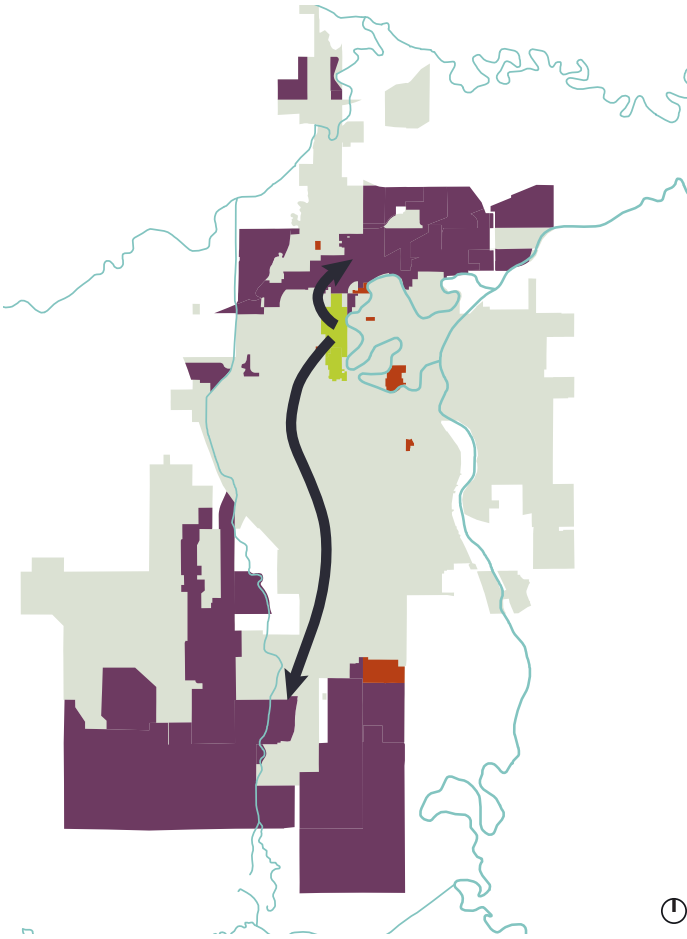


figure 1.14. employment center shifts

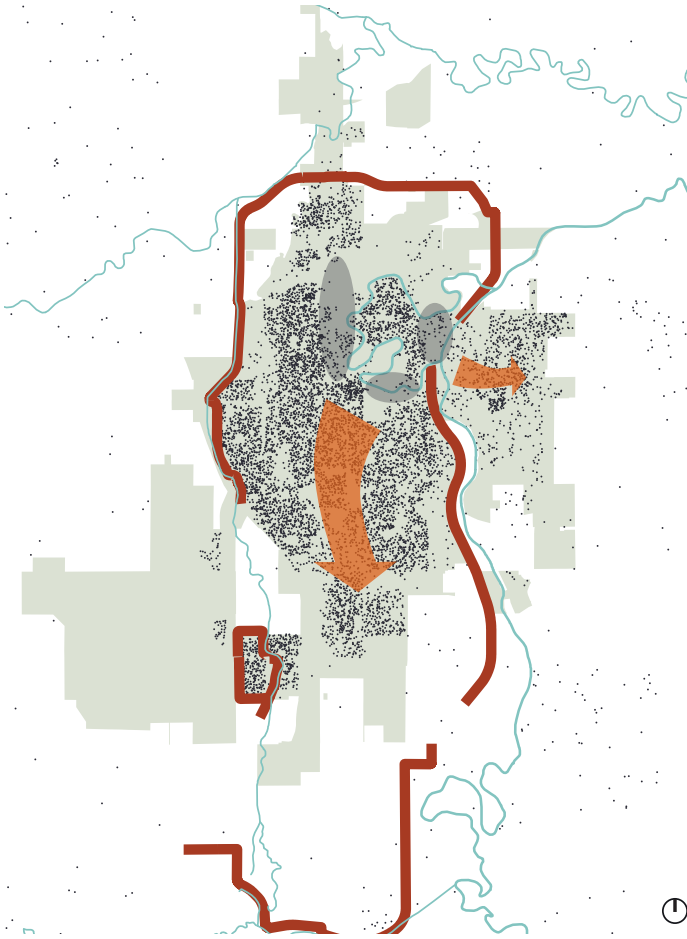


figure 1.16. population density gaps and shifts

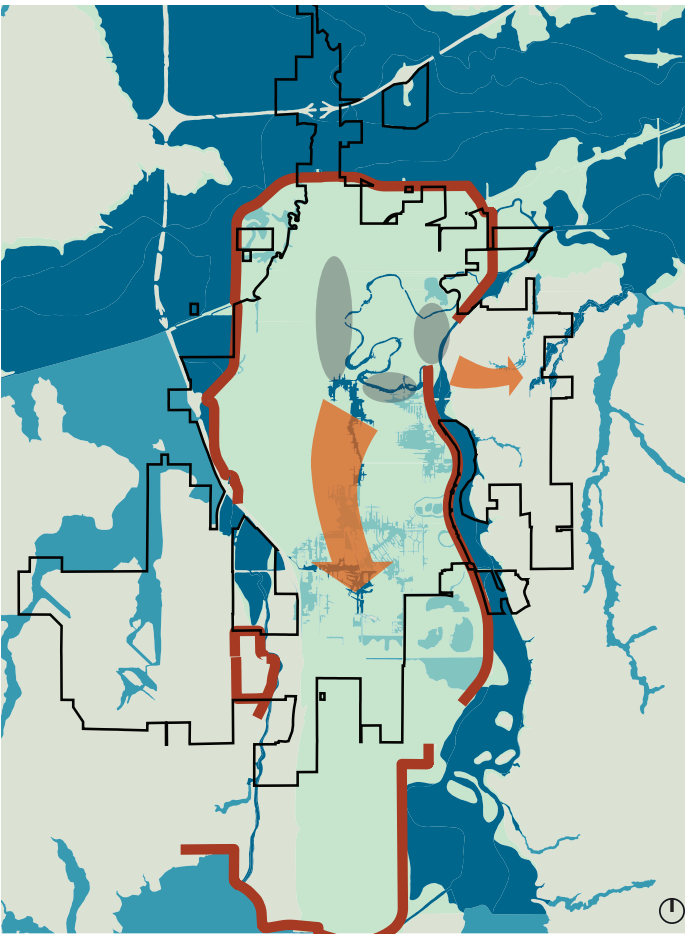


figure 1.17. development encroaching levee and drainageways

catalyzing the urban surface

dilemma + thesis

The city of Salina, Kansas, owes its beginnings to the Smoky Hill River. Founded within the fertile Smoky Hill watershed, the city initially thrived via agriculture and trade with Native Americans; later its location on the river brought milling and trade industries, along with important rail connections. Future expansions within Salina, spurred by the re-opening of the Smoky Hill Air Force Base, largely followed low-density development patterns. Flood control efforts on the Smoky Hill River and other creeks (in the form of 21 miles of levees and several diversion channels) has drastically reduced water flow in the historic channel of the Smoky Hill while limiting areas for flood-prone development. Salina, however, continues to expand outward at the expense of the city center around the historic channel, which continues its transformation from river to oxbow wetland through sediment aggradation.

Recent interest in renewal, spearheaded by an interest group named the Friends of the River, hopes to return the Smoky Hill to its once vibrant role as an asset of Salina. The Friends’ mission recognizes certain issues with the river corridor and the city itself; that is, the lack of vested interest in one of Salina’s most valuable natural systems and the desire for enhancing neighborhoods, among others. It is my position, however, to look at an even larger and projected scale; to be critical of Salina’s past development patterns and treatment of natural systems.

dilemma

The dilemma therefore can be described as this: how can a renewal/redevelopment of the Smoky Hill River Corridor accomplish the mission set out by the Friends of the River, while catalyzing urban processes to positively affect future development with the city? How can landscape enhance urban renewal within the heart of Salina, policing the sprawling nature of the city, re-envisioning and utilizing a valuable natural resource as landscape infrastructure, and creating a valuable public amenity for its citizens?

thesis

Through intensive renewal and redevelopment efforts in the Smoky Hill River Corridor, the City of Salina will re-establish a crucial link to one of its most important urban landscapes. Furthermore, this project will analyze key sites adjacent to the river in terms of their catalytic potential and show, through the application of landscape urbanism theory and design, how development trends can be influenced in the corridor and, over time, to the rest of the city.

chapter 2: instituting thought

“Across a range of disciplines, landscape has become a lens through which the contemporary city is represented and a medium through which it is constructed. These sentiments are evident in the emergent notion of ‘landscape urbanism.’”

-Charles Waldheim, “The Landscape Urbanism Reader”

chapter 2: instituting thought

process + theory

approach

The many pieces of this master’s report require a non-linear thinking approach, as one new challenge or piece of information contributes to or changes how other parts are synthesized. Bloom’s revised taxonomy of learning, within the cognitive domain, offers a great linear model for thought process: knowledge, comprehension, application, analysis, evaluation, and synthesis. However, because of the exploratory and observatory nature of project discovery, as well as the changing and addition of project conditions and elements, it is necessary to envision this cognitive path as simultaneous processes interacting with one another over the course of time, as seen in figure 2.01 (Overbaugh, 2009).

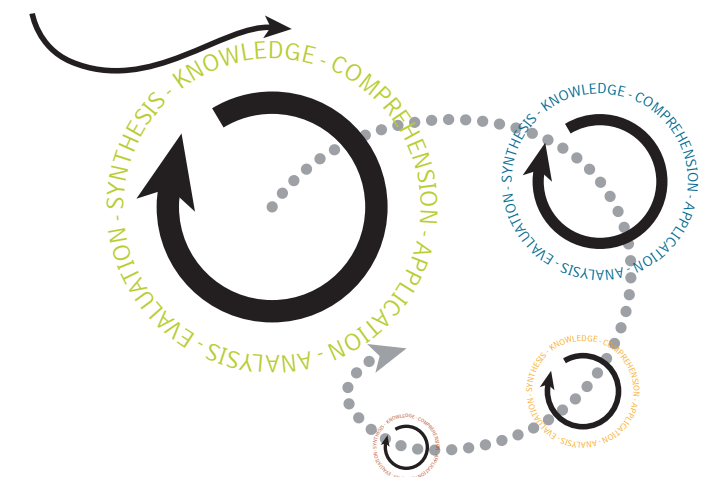


figure 2.01. thought process loops

philosophy

The goal of this project is to illustrate the catalytic potentials of key sites along the historic channel of the Smoky Hill. Through analyzing specific base site conditions and urban surfaces available for manipulation, unique sites become charged sites in terms of their perceived responses to specific design strategies. These character observations of the site in question then influence the appropriate design methodology that will conceivably catalyze adjacent urban surfaces. Figure 2.02 diagrammatically describes these relationships.

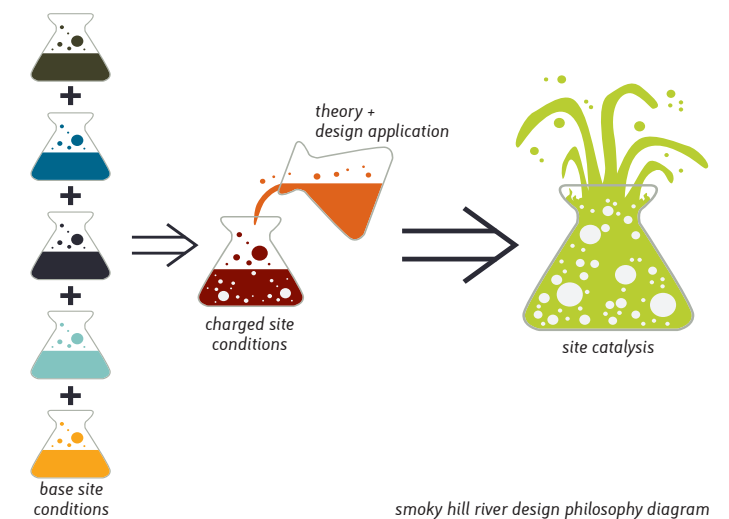


figure 2.02. design philosophy

theoretical basis

literature review + landscape urbanism primer

Recent shifts in thought concerning urbanism have relocated the traditional focus from architecture, planning, and urban design towards the landscape, thus creating the current collective theory of landscape urbanism (Waldheim 2006, 295). As described by Charles Waldheim, Associate Dean and Director of the Landscape Architecture Program at the University of Toronto:

“Landscape Urbanism describes a disciplinary realignment currently underway in which landscape replaces architecture as the basic building block of contemporary urbanism. For many, across a range of disciplines, landscape has become both the lens through which the contemporary city is represented and the medium through which it is constructed” (Waldheim 2006, 295).

The nature of the landscape entity is dynamic and expansive. Therefore landscape in urbanism is, as opposed to traditional approaches to urban design, flexible and adaptive to accommodate temporal changes. This main principle of landscape urbanism has formed three concepts within the overall theory itself: that the landscape is the prime organizing force that should be observed and analyzed in urban environments; that urban environments are surfaces, and that said urban surface is a multi-layered unit; and that landscape is temporal and dynamic, and should adapt to changes over time.

The first of the three concepts, that **landscape is the basis for urban organization**, has many implications.

In James Corner’s essay *Terra Fluxus*, he stresses that “in conceptualizing a more organic, fluid urbanism, ecology itself becomes an extremely useful lens through which to analyze and project alternative urban futures” (Waldheim 2006, 295). In this notion, the urban environment is put under scrutiny in the same way that an ecologist would examine an ecosystem; that is, delineating and understanding the area through the systems and processes of which they comprise. The approach is ecological; however, the traditional lines that separate nature and the urban environment are blurred and integrated as opposed to being separate. Shared in this notion is the ability of landscape to act, as Waldheim puts it, as “a salve for the wounds of the industrial age”, granting rectification of our infrastructural exploits of the land, such as introducing landscape elements to brownfield sites (Waldheim 2006, 295).

Further opinions on the ordering of the urban fabric concern a similar synthesized view of city and landscape. In his essay *Landscape as Urbanism*, Waldheim makes the argument for the classification of landscape as a part of the city’s infrastructure, functioning on a higher level than the traditional pastoral view of city parks as mere natural places:

“Rather, contemporary landscape urbanism practices recommend the use of infrastructural systems and the public landscapes they engender as the very ordering mechanisms of the urban field itself, shaping and shifting the organization of urban settlement and its inevitably indeterminate



figure 2.03. *Fresh Kills Park Lifescape, Field Operations*. The design is considered to exhibit many aspects of landscape urbanism.

economic, political, and social futures” (Waldheim 2006, 295).

In this, landscape becomes as essential to the urban environment as the roadways or utilities, joining with the existing infrastructure to influence the city’s future endeavors.

The second landscape urbanism principle meriting discussion is the concept of the urban surface. Best described simply as the collection of urban infrastructure, **the urban surface is the plane or multiple planes in which revelations regarding interrelationships becomes apparent**. Corner describes it as creating “both certainty and promise,” which “highlights the trajectories of shifting populations, demographics, and interest groups upon the urban surface...create(ing) an

environment that is not so much an object that has been ‘designed’ as it is an ecology of various systems and elements that set in motion a diverse network of interaction” (Corner 2006, 021). This principle expands on that of landscape as an organizing force by attempting to visualize these interconnected relationships, creating a design philosophy that reflects the forces and systems underlying an urban environment.

Elaborations upon the principle of the urban surface are a prime topic of discussion in the field of landscape urbanism. Alex Wall, in his essay *Programming the Urban Surface*, discusses several “surface strategies” useful in both literal and figurative senses, “targeted not only toward physical but also social and cultural transformations, functioning as social and



ecological agents” (Corner 1999, 287). Examples of these strategies are thickening, folding, and anticipating non-programmed use; meaning the stacking and combining of spatial uses physically and programmatically, the flexibility to warp space use for fluidity in interaction, and providing the surface services and furnishings that foster non-programmed use, respectively (Corner 1999, 287). Figure 2.04 illustrates this concept for Weiss/Manfredi’s design for the Olympic Sculpture Park at the Seattle Art Museum.

The third principle backing landscape urbanist thinking, somewhat implicit in the previous two, is that of **temporality in the landscape**. Landscapes are perhaps the longest-lived and most transformative element of the urban infrastructure; they change over seasons and years, and their uses alter to reflect social and economic events. Mohsen Mostafavi, dean of the Graduate School of Design at Harvard University, describes this inherent quality of landscapes as “forever incomplete”; however, he goes on to state the “current, temporary uses of such sites already contain clues to the potential diversity of future activities they might contain” (Mostafavi 2004, 176). Essentially, the temporality and flexibility of the landscape and its programs can be harnessed as a generative visionary asset for future use. The concept of an open-ended spatial program is one that reflects the longevity of a successful landscape, adapting and evolving as needed. As Corner puts it, “this approach...affords residents a range of programmatic configurations as seasons, needs, and desires change...that anticipates change, open-endedness, and negotiation” (Waldheim 2006, 295).

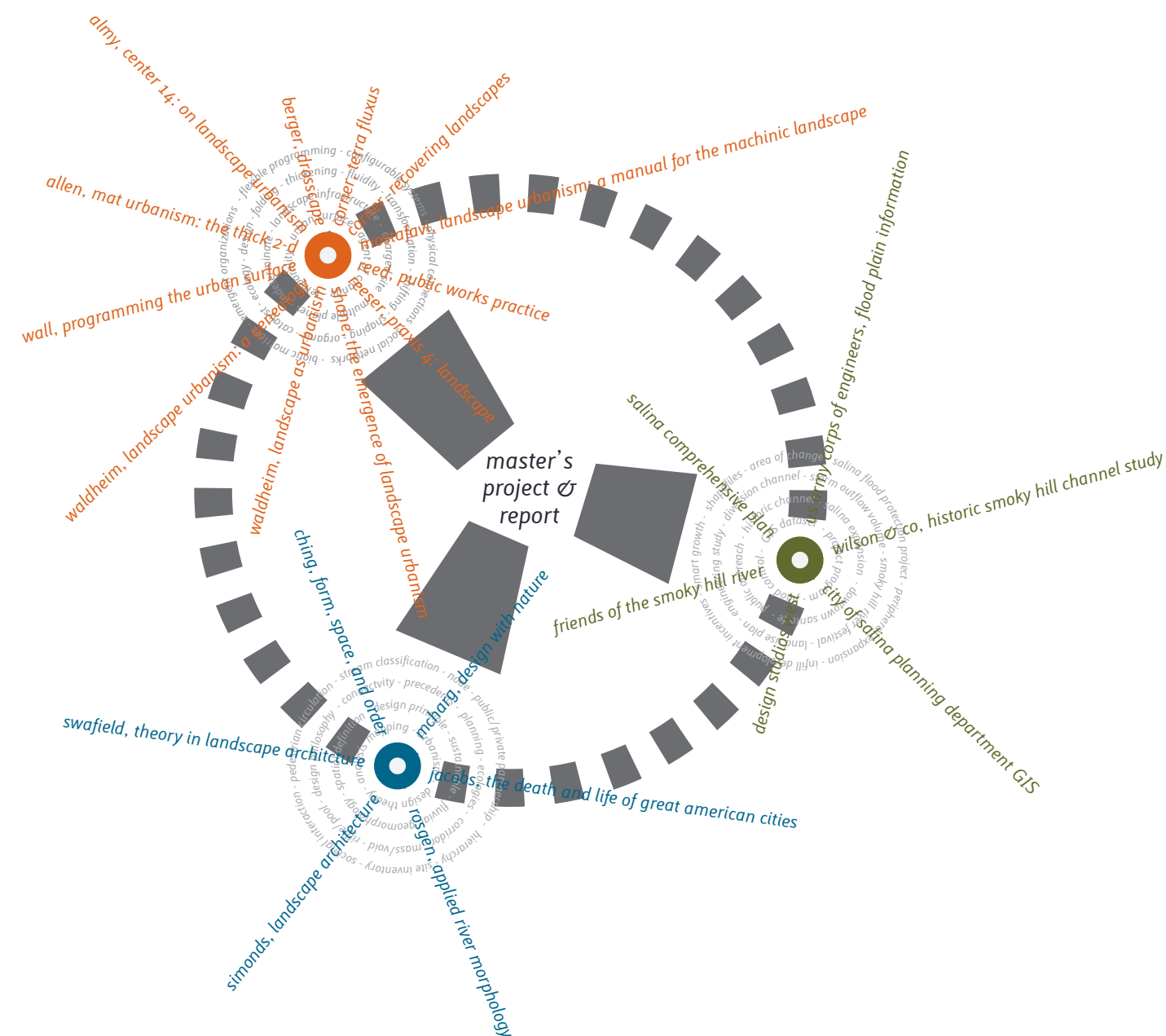


figure 2.05. literature map, integrating landscape urbanism, Salina-specific references, and supplemental literature

The philosophical, theoretical, and technical foundations of this master's report lie within key literary and municipal resources, as seen in figure 2.05. These bodies of work are organized into three realms of discourse regarding landscape urbanism thinking, general design theory, and documents

and data that informs the conditions of the Salina and the Smoky Hill. Together they guide and inform the decision-making processes within this master's report.

chapter 3: precedent surfaces

“Exposure to the design tactics and attitudes operating under the rubric of “Landscape Urbanism” raises awareness of the necessity of a reworked agenda for American urban design practice: one that gives significant weight to natural, ecological, social and economic systems. Still to be determined is the degree to which Landscape Urbanism’s questions and techniques can provide us with a way to actually cope with phenomena of urban densification, evacuation and transformation.”

-Dean J. Almy, *CENTER 14: On Landscape Urbanism*

chapter 3: precedent surfaces

central platte valley + the high line

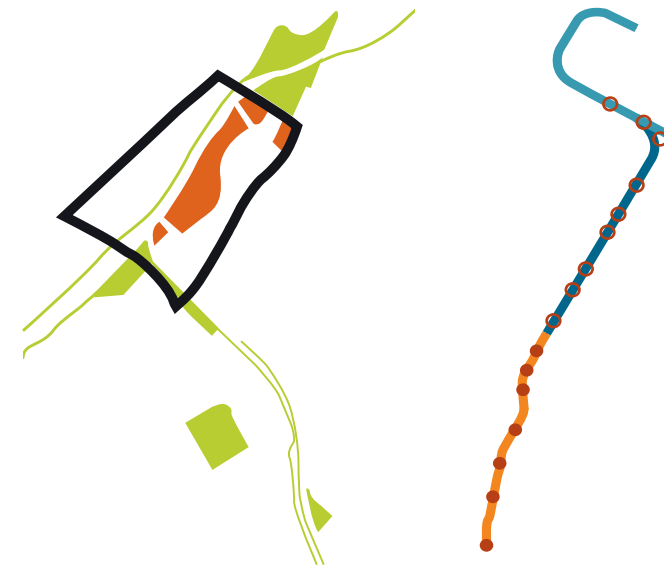


figure 3.01. diagrams of the CPV district and the High Line

After the exploration of many precedent studies, two became noteworthy in their relationships to both the landscape urbanism principles delineated and the historic channel of the Smoky Hill running through Salina. These precedents are the Central Platte Valley (CPV) district in Denver, Colorado and the High Line in New York City, New York.

Inherently, both of these projects involve a relationship to a corridor; CPV has developed into a critical node along the South Platte River corridor, while the High Line is a corridor itself that interacts with adjacent districts and neighborhoods. These differing natures highlight two unique perspectives of catalyzing strategies: the node catalyzing the corridor and the corridor catalyzing the district(s). Together, the two precedents offer a broader insight into developing a design methodology for the Historic Smoky Hill river corridor.

crafting a methodology

The relatively new theoretical realm of landscape urbanism, as implied by Almy, is speculative in its application across the design professions. While the theory has origins in ecological and urban discourse, no set guidelines or methodologies exist for responding to the complex dilemmas of contemporary urban environs. It is therefore necessary to analyze precedents that exhibit these landscape urbanism qualities; that is, multi-layered urban surfaces, prime organizing forces, and agents of change, in order to derive a sensible approach for the application of such theory.

The driving goal behind these precedent studies is to discern how best to strategize site design. Observations are first derived from inventorying the way in which the precedents’ design strategies engage the urban surface. Analyses of these strategies are then evaluated in terms of their applicability to the Smoky Hill corridor. This evaluation, when combined with the site inventory, analysis, and programming elements, informs a design strategy that will attempt to maximize the potentials of a charged site (figure 3.02).

methodology

urban surfaces + organizing forces + agents of change

urban surfaces + organizing forces

Landscape as a “Multi-Layered Surface” has roots in the McHarg-ian mapping of traditional landscape analysis in terms of evaluating elements in the urban realm based off particular layered features and processes. In landscape urbanism however, these “surfaces” are not static conditions that represent a snapshot in time; they are prone to adaptation and change, influencing and interacting with one another. While some elements of these surface features are ephemeral, fleeting, or even singular instances, others persist over the course of time, becoming dominant surface features that act as frameworks shaping other processes.

Defining landscape as the “Prime Organizing Force” means to define the entire urban field itself as a landscape, not just the traditional view of parks and open space. Building, landscape, social and ecological processes, and other “surfaces” consist of the urban field. The study of processes attempts to recognize connections and relationships across a system; in the urban field these processes can number into the infinite, and as mentioned can be short-lived. Those surface features that persist are then assumed to be the strongest and most prime; therefore it is these persisting features that merit inventory, and eventually analysis within the context of this master’s report. Thinking about these surface process features in terms of connections (as in one element to another in the urban field) having persisting tendencies, the following are derived:

- 1. Physical Connections
 - i. Pedestrian
 - ii. Vehicular
 - iii. Multi-Modal
- 2. Social Connections
 - i. Recreation
 - ii. Historic
 - iii. Educational
 - iv. Cultural + Artistic
 - v. Community
 - vi. Commerce +Employment
 - vii. Political
- 3. Landscape Infrastructural Connections
 - i. Migratory
 - ii. Habitat
 - iii. Fluvial
 - iv. Energy

agents of change

While these processes and relationships of the multi-layered surface have either been enhanced or created, this analysis inventories those surfaces and explains how they have come to define the field in which they exist. The precedents offer connectivity implicitly to an extent; being corridors, they tend to be inherently horizontal (or at least linear) in their urban field and connect several parts to a whole.

The temporality of landscape is implicit in the two former ideas, characterized by uncertainty, flexibility, and adaptability. The notion of “Landscape as an Agent of Change” exemplifies

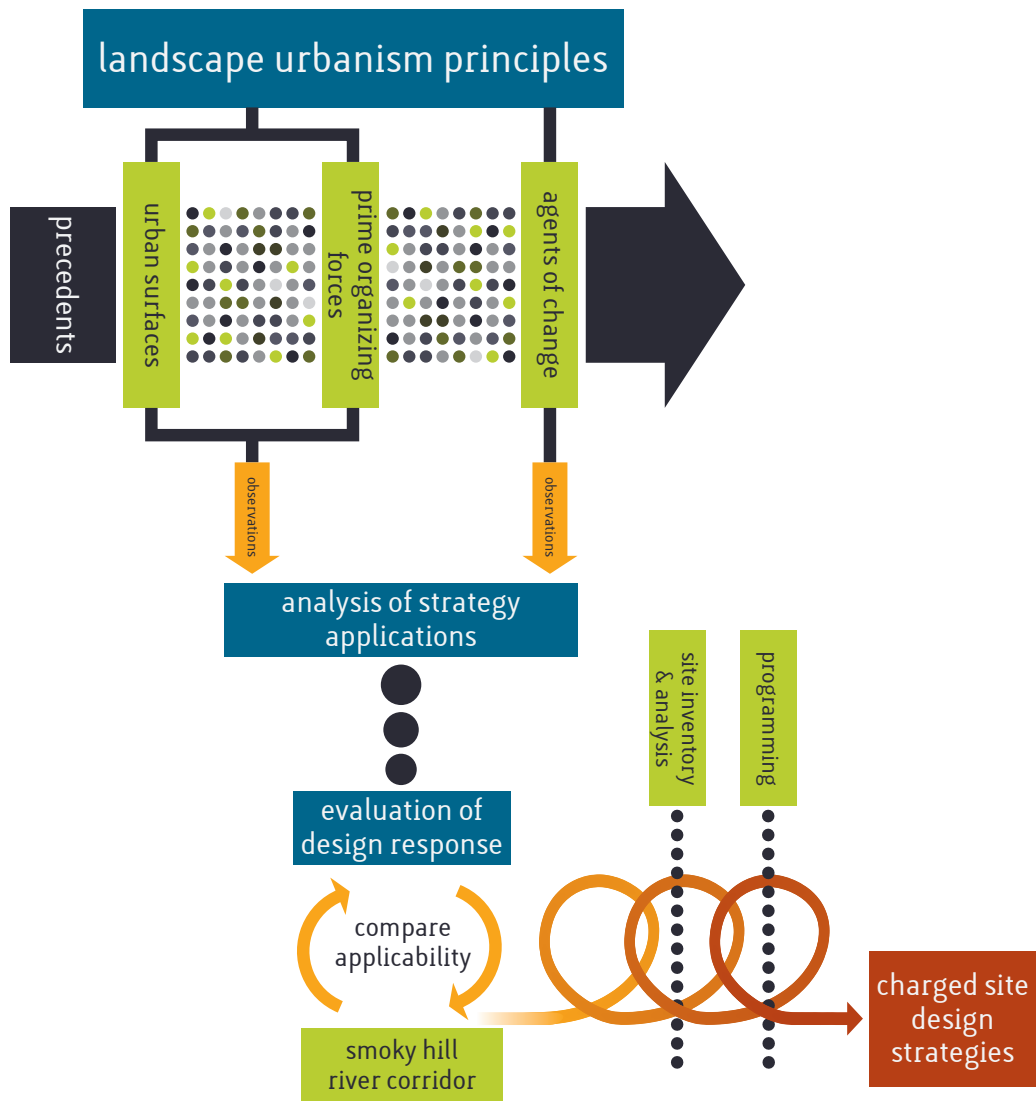


figure 3.02. precedent methodology applied to the Smoky Hill River Corridor

this, implying that recognition of the inner workings of the urban field’s systems can inform design. A designer then engages those dynamics how they see fit.

Working within the context of existing urban fields, two design opportunity types become prevalent around these charged sites. Those are as follows:

- 1. Regenerate – regenerating charged sites through reclaiming despondent ground. Site contaminate remediation, Brownfield

redevelopment, and the adaptive reuse of decaying infrastructure exemplify this type of strategy.

- 2. Invigorate – invigorating charged sites through the thickening and manipulation of the urban surface. Densification of population and uses, intensification of corridor use and enhanced access, and the re-imagining of existing places constitutes this strategy.



figure 3.03. model of Commons Park and the Central Platte Valley

central platte valley

Denver, Colorado

transforming the riverfront

Central Platte Valley holds historic roots with the city of Denver; the original townsite, located at the confluence of Cherry Creek and the South Platte, was also an important convergence point of several western trails. In 1858, General William Larimer took title to the land from Little Raven, an Arapaho chief whose tribes had long made seasonal encampments near the waters. As the city grew, the area transitioned from a mixed-use neighborhood to an expansive rail yard steeped in industrial use, to the decline of rail use in the 1980s and descent into decay and despondency.

Plans for cleaning up the 75 acres of brownfield began in the late 1980s, and Civitas began work with the City of Denver and the Trillium Corporation in 1994. Recognizing that a park could catalyze redevelopment in the district, Mark Johnson, principal at Civitas, stated, “What we wanted to do at Commons Park...was spend \$30 million to build downtown”. Fortunately, Mayor Wellington Webb and David Syrie of Trillium believed in the concepts power, and discussions began on the construction of Commons Park and its effect on the surrounding district.

(DenverInfill.com 2008; Downtown Denver Partnership 2009; Partners for Livable Communities 2006; Walker 2001, 100-103)

1. Date
 - 1994-2000
2. Size
 - 75 acres
 - Commons Park: 26 acres
 - Redevelopment District: 40 acres
3. Designers
 - Civitas (main consultant, master planning of Commons Park)
 - Jones & Jones (Commons Park final design)
 - Design Workshop (urban planning of neighborhood)
4. Client/Entities
 - City of Denver Parks Department
 - Trillium Corporation (major land owner)
 - East West Partners (developers)
5. Funding
 - i. Trillium Corporation
 - \$500,000 for Commons Park
 - \$5 million for bridges and other park improvements
 - ii. Private donors
 - \$15 million for acquisition of non-Trillium parcels
6. District Descriptions
 - i. Low-high rise mixed-use residential (2,227 units with 800 planned), office, retail, hotel
 - ii. Demographics
 - 3,596 estimated 2007 population (6,751 projected for 2020)
 - 23.58% ages 25-34
 - 3,345 employees
 - \$120,517 average household income
 - iii. 90 acres of park space over entire district

central platte valley

urban surfaces + organizing forces

1. Physical (Transportation) Connections

i. Pedestrian + Bike

- Platte River Bridge – one of three pedestrian bridges linking Northwest Denver over the river to downtown Denver; connects with center courtyard of Commons West Apartments on west side
- Highland Bridge – second of three pedestrian bridges; links Highland District to Central Platte Valley District over I-25, and connects to pedestrian corridor running to the Civic Center
- Millennium Bridge – third of three pedestrian bridges; crosses the Consolidated Main Line rail connecting to 16th Street Mall
- South Platte Greenway – connecting to Commons Park, the Greenway is an extensive pedestrian and bicycle route linking numerous other areas along the Platte River

ii. Vehicular

- 15th Street, 20th Street, and Speer Boulevard act as the northwest-southeast corridors, while Little Raven Road bisects the district between Commons Park and the rest of the development

iii. Multi-Modal

- Connections to the 16th Street Mall via Millennium Bridge connects the district to Union Station, a major stop for Commuter Rail and Light Rail

2. Social Connections

i. Recreation

- Commons Park
- South Platte River
- Coors Field – Colorado Rockies
- Pepsi Center – Colorado Avalanche, Denver Nuggets, Colorado Mammoth

- Elitch Gardens – water park
 - City of Cuernavaca Park
 - Centennial and Confluence Parks
 - Denver Skate Park
 - Railyard Dogs Park
- ii. Historic
- Confluence of Cherry Creek and Platte River – Original townsite of Denver, many western trails converged at this point. Little Raven Street is named after the Arapaho chief who sold the land title to General William Larimer
- iii. Community
- Riverfront Park Community Foundation – “foster excellence, diversity and opportunity in the downtown Denver community primarily in education and arts”.
 - East West Urban Management – property management for the CPV
- iv. Commerce+ Employment
- the 16th Street Mall connections links CPV to downtown Denver, a center of both commerce and employment in the city
 - numerous bohemian shops, restaurants, clubs, and services within district
- v. Political
- Involved entities during the site’s creation included the City of Denver, the Trillium Corporation, and East-West Partners, and Civitas; adherence to a particular vision and the collaboration amongst all involved parties resulted in the creation of a coherent district



figure 3.04. adjacencies

CPV boundary districts unique sites



figure 3.06. river + rail corridors

CPV boundary river rail

3. Landscape Infrastructural Connections

i. Fluvial

- South Platte River Corridor
- Cherry Creek Confluence

ii. Habitat Restoration

- Landforms inspired by sand-hill prairies
- the Seeps – wetland environs planted with native grasses, shrubs, and trees, expected to succeed to a Cottonwood riparian forest



figure 3.05. parks + greenways

CPV boundary existing implimented



figure 3.07. connections

greenways 16th street mall nodes

iii. Stormwater and greywater

- “Storm Ceptors” – filter stormwater runoff from nearby development before releasing it into wetland swales
- Farmers’ and Gardeners’ Ditch – formerly an irrigation canal turned source for coolant water for the Cherokee Power Plant, the ditch now feeds a fountain near the west entrance before irrigating the Seeps

central platte valley

agents of change

- 1. Regenerate
 - The location of the district over the former rail yards, a 75 acre brownfield site with decaying, unused rail infrastructure
 - Renewal of the river’s riparian edge with natives, the Seeps, and “storm ceptors”
 - Catalyzing the completely new development of an urban district through the construction of Commons Park; an estimated 3,596 people now reside in the district as it continues to grow and evolve
 - Redefining the nature of Denver’s downtown relationship and link to the Platte River; after the successes of CPV, the Downtown Denver Partnership, Inc. suggests catalyzing development in the Union Station portion of downtown Denver through increased multi-modal connections
- 2. Invigorate
 - Manipulating and capitalizing on adjacent pedestrian corridors through the construction of three pedestrian bridges
 - Celebrating the historic qualities of the site through replicating regional landscape aesthetic and recognition of the site’s historical importance to the City
 - Fostering a communicable neighborhood environment that can flourish over time; recommendations by the Downtown Denver Partnership, Inc. include increasing family-oriented development and attracting schools

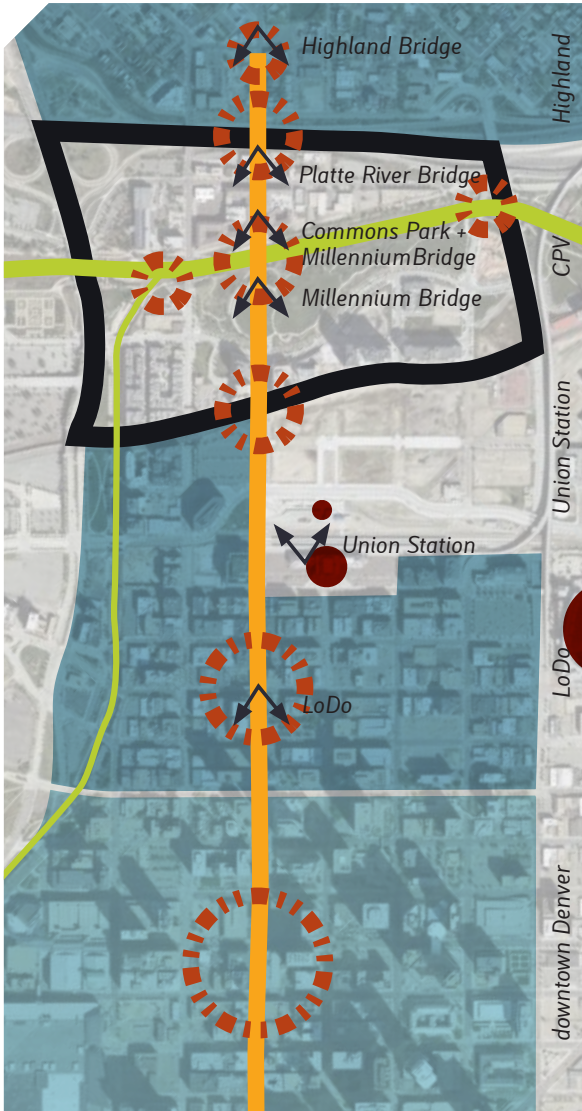


figure 3.08. 16th street corridor connectivity



figure 3.09. Highland Bridge



figure 3.10. Platte River Bridge



figure 3.11. Commons Park and Millennium Bridge



figure 3.12. Millennium Bridge

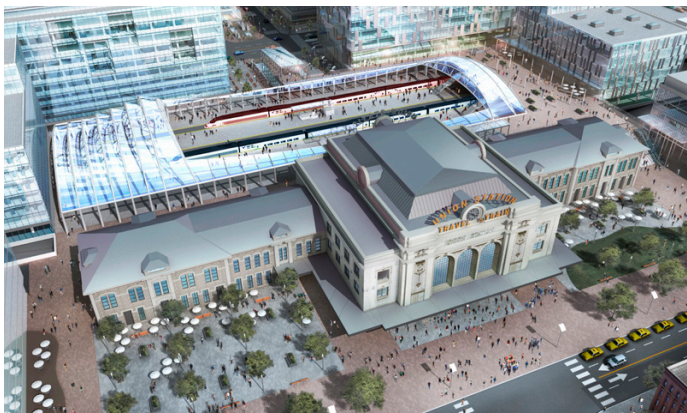


figure 3.13. proposed Union Station improvements



figure 3.14.16th Street Mall

central platte valley

park + district features



figure 3.15. Central Platte Valley location key

district features

parks and public spaces

- 1. 15th Street Overlook Plaza
- 2. Wetland “Seeps”
- 3. Stairs to the Long Meadow
- 4. View from Confluence Park
- 5. Denver Skatepark
- 6. Little Raven Promenade

real estate

- 7. Central Platte Valley Panorama
- 8. Creekside Lofts
- 9. Park Place Lofts
- 10. The Brownstones
- 11. Glass House
- 12. ONE River Place
- 13. Riverfront Tower



figure 3.16. 15th Street Overlook Plaza

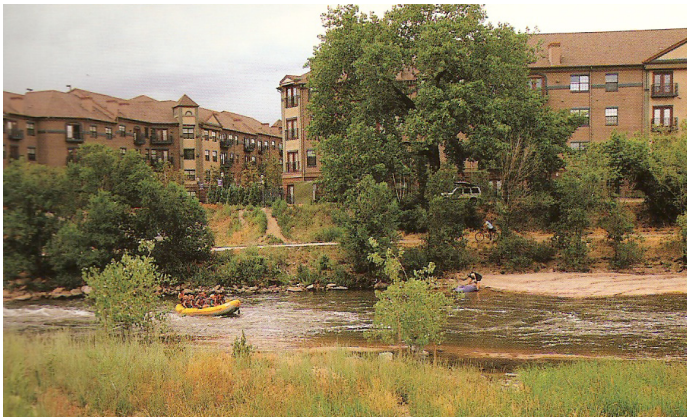


figure 3.17. wetland “seeps”



figure 3.18. stairs to the Long Meadow



figure 3.19. view of rapids from Confluence Park



figure 3.21. Creekside Lofts



figure 3.23. ONE River Place



figure 3.20. Denver Skatepark



figure 3.22. view of the Glass House building from the park



figure 3.24. Riverfront Tower

central platte valley

application of landscape urbanism

The development of CPV and Civitas' Commons Park observe surface strategies in a number of ways. Early in the design planning, Civitas recognized a few key features of the district's surfaces that could be manipulated: its adjacency to existing pedestrian corridors, proximity to the river and downtown, its importance as a historic landmark, and its brownfield characteristic as a former rail yards. Rather than implement a costly build out of new homes and retail services in the beginning stages, Civitas utilized the district's proximities and created a plan for a park that would catalyze development in the district. The Trillium Corporation (the primary landowners) eventually acquired the parcels they did not own, set up a metropolitan district, donated the land that would become Commons Park to the district who then donated it to the Denver Parks Department. Trillium's hope was that the remaining land would increase in value with the completion of the park, and it was right; East-West Partners, the developers selected by Trillium, are at near buildout. Today the district is a lively developing community, evidenced by the formation of the Riverfront Park Community Foundation and an online neighborhood blog notifying residents of events, fitness clubs, and business openings (Walker 2001, 100-103).

Because the district itself is relatively young, the processes and integrations of the urban surfaces to one another are still developing; however, the connections the district was based on are strong and persisting in their organizational qualities, and will likely foster the development of new surfaces

and the thickening of others. In this regard, the district exhibits more regenerative qualities than invigorating qualities, as the change itself was much more transformative than enhancing. Catalysis may leech over to adjacent districts through the increased connectivity of this centrally located arm of the city center to downtown and the river, regenerating and invigorating applicable urban surfaces. The districts, notably Union Station and Prospect, exhibit these potentials. Union Station in its current state is much like CPV was prior to development, and is primed for regenerative approaches. Prospect, on the other hand, will likely require a mix of regenerative and invigorative approaches due to its existing character and infrastructure.



figure 3.25. a pick-up ballgame in Commons Park at Central Platte Valley

central platte valley

significance + strategies

1. Construction of Commons Park as a base reagent

 - The park itself acts to stand alone in the district based off its connection along the South Platte Greenway
 - The park catalyzes the district through its adjacency to program-less brownfields, setting the stage to entice development
2. Facilitated connections

 - The district has emphasized creating connections to corridors to and through other districts with bridges and trails
 - Future plans for connective corridors between existing features in the larger context; i.e., the light and commuter rails and Union Station
3. Public and Private entity involvement

 - Trillium Corporation – as the single primary land owner of all 75 acres, the project had a sense of unification from the start; additionally, Trillium
4. Renewal of CPV and Denver’s relationship to the South Platte

 - Replacement of a decaying urban surface with a new park “landing” for downtown
 - The renewal of native, successive vegetation along the South Platte’s edge, along with stormwater BMPs to improve the quality of water discharge into the river

provided significant financial investment for Commons Park and later CPV as a whole

- City of Denver and CPV Development Council – the entities assisting Trillium and East-West partners establish the park and influence urban design planning and complimentary zoning
- East-West Partners – the primary developer that ensured the CPV Development Council’s and Trillium’s vision was carried through

The applications of these strategies to the Smoky Hill are largely feasible. The renewal of the relationship between adjacent neighborhoods and districts in Salina is a main initiative for the Friends of the River; however, careful attention must be paid to the nature of the river and neighborhood characteristics to determine what relationship is appropriate. These connections can then stretch through the district via the enhancement of existing or creation of new corridors.

The idea of a reagent project that creates the district catalyst is perhaps the most important piece derived from the analysis. In the case of CPV, although Commons Park was the first constructed piece of the district, it still interacted with other urban surfaces, primarily as a site along the South Platte Greenway. During construction of other district elements, it was available for interaction with systems on a larger scale while creating an impetus for investment around the park. The project site in Salina should act, influence, and respond in a similar fashion.

In regards to the interaction between public and private entities, the ultimate success of the district stems from a unified vision between several parties. With Salina, many parcels along the river are privately owned, unlike CPV was. Although this is not necessarily an extreme deterrent, significant collaboration amongst larger numbers would likely have to take place, as well as finding ways to entice initial investment. The Friends of the River have proven to hold public interest in high regards with

their public outreach events, so the project has the vision; further invested interest by key parties will assist in making the project successful.

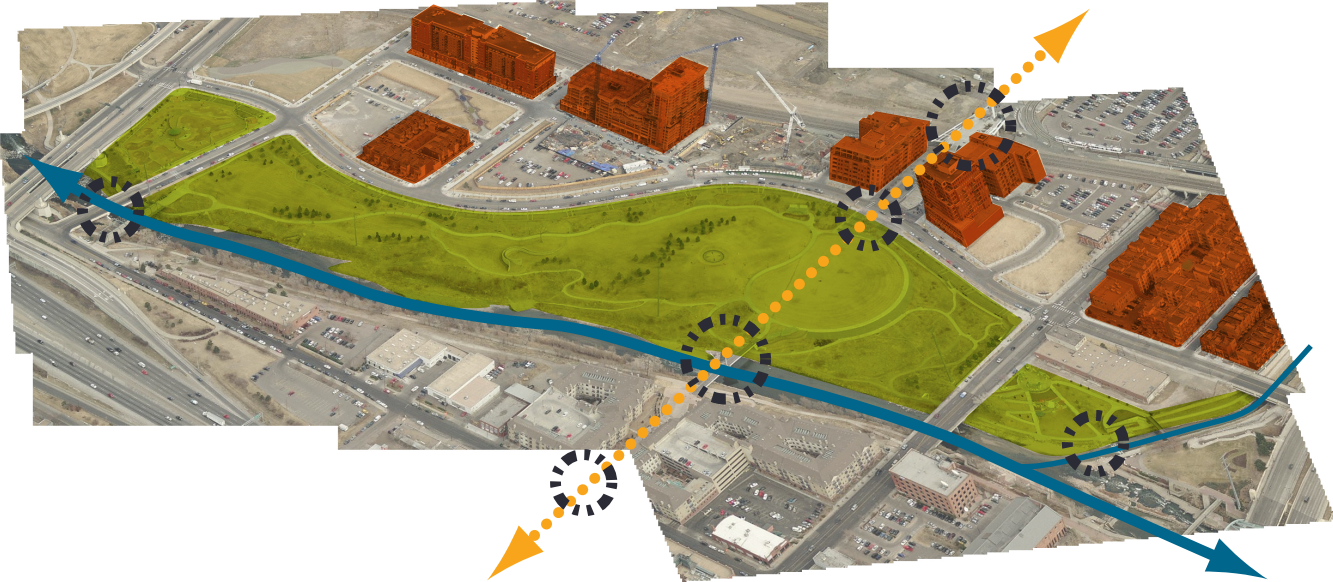


figure 3.26. catalyzing adjacencies in Central Platte Valley



figure 3.27. virgin state of the High Line

urban adaptation

The High Line was originally built in the 1930s as a part of the 1929 West Side Improvement, a large-scale infrastructure project initiated by the City and State of New York and the New York Central Railroad. Its purpose was to separate the rail lines from pedestrian traffic 30 feet below to eliminate dangerous crossing conflicts. The Line ran from the Hudson Rail Yards to Spring Street. During the

1950s, growth of interstate transportation caused a decline in rail traffic, and in the early 1960 its southernmost tracks were demolished. By 1980 all trains ceased running, and during the mid 1980s a group of property owners lobbied for the tracks’ demolition, challenged by various activists in favor of the structure. The tracks laid dormant for 19 years, undergoing plant succession on its gravelly tracks with a variety of grasses, wildflowers, and trees, evolving into a wild urban landscape.

the high line

New York City, New York

In 1999, under continuing threat of demolition, Joshua David and Robert Hammond of the High Line neighborhood formed the Friends of the High Line (FotHL). The not-for-profit group, consisting of concerned residents, businesses, design professionals, and civic organizations, advocated the Line as an urban park and linear trail. During 2001 to 2002, FotHL, in joint venture with The Design Trust for Public Space, hired architect Casey Jones to conduct a planning study; later in 2002, the Friends garnered support from the City, and found from the results of the study that the new tax revenues generated from the Line’s construction would exceed construction costs. The plan utilized railbanking: a federal act allowing the conversion of out-of-use rail corridors into trails and public space, “banking” the lines for potential future use.

In 2004, a design competition was held for the Line; Field Operations, a landscape architecture firm, and Diller Scofidio + Renfro, an architecture firm, won. The year 2005 brought authorization by the Surface Transportation Board and the passing of ownership from CSX Transportation, Inc. to the City of New York, ensuring the Line’s preservation. Groundbreaking and site preparation began in 2006, with landscape construction beginning in 2008. The first completed first phase opened to the public in June of 2009, with the second phase slated to open in 2010.

(The City of New York 2005; Cortese 2008; Friends of the High Line 2009; Friends of the High Line 2008; Greenhood and Company 2003)

1. Location
 - Meatpacking District
 - West Chelsea
 - Clinton/Hell’s Kitchen
 - West side rail yards
2. Date
 - 1999-present
3. Size
 - 1.5 mile long abandoned freight rail line
 - 4.78 acres
4. Designers
 - James Corner Field Operations (project leaders)
 - Diller Scofidio + Renfro
5. Client/Entities
 - Friends of the High Line
 - City of New York
 - CSX Transportation, Inc. (rail owners)
 - The Federal Surface Transportation Board
6. Funding
 - i. City of New York
 - \$61.75 million funding commitment over 4 years of construction
 - ii. Federal Transportation Legislation
 - Representative Jerrold Nadler and Senators Hillary Rodham Clinton and Charles Schumer: \$18 million
7. District Descriptions
 - i. Low-high rise mixed-use residential , office, retail, hotel
 - ii. Demographics
 - 47,197 (2009 estimate)
 - largest age group: 47.7% ages 25-44
 - \$111,949 average household income
 - Vibrant artistic, shopping, and nightlife district

the high line

urban surfaces + organizing forces

1. Physical Connections

i. Pedestrian + Bike

- Hudson River Greenway – A bike and pedestrian trail running the western side of Manhattan from West 59th Street to Battery Place parallel to the High Line; connections to the Line are facilitated by extensions of street level access points and plazas
- 14th, 18th, 23rd, 28th, and 34th Street corridors stem from street level access east and west
- The Line provides an elevated pedestrian link from the Hell’s Kitchen, Chelsea, and West + Village neighborhoods, in addition to the Meatpacking, Gallery, Rail Yard, and Garment districts to the Jacob Javits Convention Center

ii. Vehicular

- The line runs parallel to 10th Avenue; it utilizes street adjacencies by offering overlooks and elevated seating areas and walks

iii. Metro

- The A, C, and E trains and the 1 train have stations two and three blocks east, respectively; high profile plazas and nodal features exist where the 14th, 18th, 23rd, 28th, and 34th Street corridors intersect

iv. Bus

- The 11, 14d, and 23 buses run parallel or adjacent

2. Social Connections

i. Recreation

- Chelsea Piers
- Hudson River Greenway
- 14th Street Park
- Overlooks and Gathering Areas– the Line offers extensive viewing opportunities of the Hudson River and the street scene below, notably at Gansevoort

Plaza and the 10th Avenue Elevated Square; seating lawns, amphitheaters, and water features

ii. Historic

- Preservation of infrastructure; the Line’s intrinsic post-industrial character, resilient landscapes, and Art Deco flourishes were preserved, accentuated, and/or refurbished, celebrating its historic qualities

iii. Educational

- The High Line Schools Program – curriculum guides for lesson plans involving environmental, social studies, science, English language arts, math, and art through the Line’s intrinsic qualities
- Events – numerous design, garden, family, art, and history oriented programs are planned for visitors and residents of all ages

iv. Cultural + Artistic

- Gallery District – running through a large portion of the gallery-filled district, many gallery owners were early supporters of Line
- High Line Art Program – commissions and creative partnerships ensure the cultural catalysis of the linear urban parkway and the arts in the district
- Chelsea Market Passage – the portion of the High Line running through the Chelsea Market is designated as a public art display area, planned to change work exhibits periodically

v. Community

- Neighborhoods – the Chelsea and West Village neighborhoods are well-established communities with numerous block-based organizations and services

vi. Commerce +Employment

- Chelsea Market – former baking factory turned mixed use indoor food market directly adjacent to line



figure 3.28. corridors

the high line phases
i ii iii

metro/bus lines

greenways

connected/disconnected stops

- Neighborhood Scene – countless dining, shopping, and nightlife venues exist in mixed-use forms throughout the districts

vii. Political

- Rail-Banking – the 1983 National Trail Systems Act allowing line reuse as trails, “banked” for future potential use
- Public Use and Property Rights – many public and private entities own rights below, above, and adjacent to the Line; the design required observation of these and the avoidance of conflict
- Community Board 4 – the advisory board for the Chelsea & Clinton/Hell’s Kitchen neighborhoods, they oversaw changes to land use, zoning, budget, and services involved with the Line’s design and implementation

3. Landscape Infrastructural Connections

i. Landscape Preservation

- Northern Spur – a horticulture preserve that exhibits



figure 3.29. connections

existing/future access points

activated/future activated sites

activated/future activated corridor nodes

activated/future activated corridors

an untouched parcel of native grasses and perennials

- Woodland Flyover – a walkway elevated above the Line brings visitors through a dense native woodland created by the microclimate environs of the surrounding buildings
- Native Plantings – flora that flourished on the Line before the design implementation was used as a palette for the native plantings in both the natural restorative and manicured landscapes; 161 out of 210 plants are natives to New York

ii. Natural Vegetation Systems

- Green “Roof” – the High Line, due to its abundance of natural plantings, has inherent green roof qualities and retains much of the stormwater falling onsite: estimated at 60% to 80%
- Permeable Paving – water falling on porous hardscape permeates to nearby planting beds

the high line

agents of change

1. Regenerate
- The Line itself is a post-industrial structure converted from a purely rugged, inaccessible landscape to a usable public space
 - Emphasis on replicating the successive, resilient planting design
 - The Chelsea neighborhood is known for its conversion of post-industrial infrastructure to mixed-use living environs; the High Line further catalyzes this constant trend, especially in regards to the Rail Yards terminating the Line
2. Invigorate
- The Line acts to re-envision the 10th Avenue corridor in Chelsea into a valuable recreationally, educationally, and culturally charged corridor
 - Further celebrating the post-industrial character of the district through adaptive reuse
 - Publicity from the Line has catalyzed the adjacent blocks with private investment; Frank Geary's IAC building, the Standard Hotel, and Renzo Piano's future Whitney Museum; an estimated \$4 billion in private investment due to the Line is expected in the next 30 years
 - Incorporating the native vegetation throughout the design as a "green roof" of sorts, the continues to Line absorb significant portions of its rainwater
 - 10-15% estimated increase of property values along the Line
 - The Line is expected to bring an estimated \$900 million in revenue to the City in the next 30 years

- adjacent site identification
- unique sites
1.

Whitney Museum (future site)
2.

Chelsea Market
3.

14th Street Park
4.

Chelsea Piers
5.

IAC Building
6.

Clement Clarke Moore Park
7.

Hudson River Park
8.

Hudson River Greenway
9.

Chelsea Park
10.

Starrett-Lehigh Building
11.

Penn Station
12.

West Side Rail Yards
13.

Jacob K Javits Convention Center

- districts
14.

West Village
15.

Meatpacking
16.

Gallery
17.

Rail Yards
18.

Garment

neighborhoods

19.

Greenwich Village

20.

Chelsea

21.

Hell's Kitchen

the high line

phase I features



figure 3.31. High Line phase I features



figure 3.32. Gansevoort Plaza



figure 3.33. Diller - Von Furstenberg Sundeck Access



figure 3.34. Chelsea Market Public Art Passage



figure 3.35. Diller - Von Furstenberg Sundeck + water feature



figure 3.36. Gansevoort Grasslands



figure 3.37. Washington Grasslands

the high line

application of landscape urbanism

The High Line's recognition of urban surfaces is extensive. From the start, advocacy on the FotHL's part influenced neighborhood outlook and governmental process, even on the federal level with the rail-banking strategy. By combining the important historical qualities, incentives for the creation of open space for the community, desires for maintaining the neighborhood identity, and integration with existing and future land and building uses, the FotHL's objectives were realized.

From advocacy to the Line's opening, the project was catalyzed further through the publicity it received, which staged further catalysis. Evidence for this is exemplified in the estimated revenues and public investment figures previously mentioned, the construction (or planned construction) of high profile urban elements, and neighborhood cultural and educational promotion via the line.

The success of the High Line in a large part can be attributed to the quality of the urban surfaces in the Chelsea neighborhood and its districts. This is largely different than what was observed in CPV; whereas CPV utilized and altered the nature of its urban surfaces to create a district, the Line acts as an additional reagent to an established district full of complex processes, catalyzing Chelsea further. Under this observation, the Line acts more as an invigorating element to adjacent districts, albeit the regenerative nature of the Line itself. Additional portions of the Line, as they are completed, will likely demonstrate a similar effect. Phase II will incorporate more park features and opportunities

for connection, having a similar effect to its adjacent sites as what was accomplished in Phase I. Phase III will be more regenerative in its catalysis to its adjacent Rail Yards (which the FotHL are advocating the acquisition of), while providing a strong connection to the Chelsea surface processes.



figure 3.38. constrution of the High Line

the high line

significance + strategies

1. Renewal of the High Line as a base reagent

- Publicity of the line spread advocacy from the neighborhood to the state scale (arguably to the international scale in the design world)
 - The Line catalyzes the artistic, educational, economic, and recreational urban surfaces through a programmatically-concentrated corridor
2. Facilitated connections

- The elevated linear park re-envision the experience travelling along 10th Avenue and through adjacent districts
 - The Line’s design responds to existing transportation nodes by integrating access points along those connecting corridors
3. Public and Private entity involvement

- FoTHL: their persisting advocacy efforts have proven extremely successful in seeing project completion and establishing rich artistic, educational, and recreational programming
 - City of New York and the Manhattan Community Board 4: cooperation and collaboration with these entities have ensured the design addressed appropriate land planning and zoning needs, transportation issues, and significant funding
4. “Central Park Effect”

- The line catalyzes high profile investment along the corridor (\$4 billion current)
 - The line, as a high profile public park space, generates revenue for the city (\$900 million over the next 30 years)

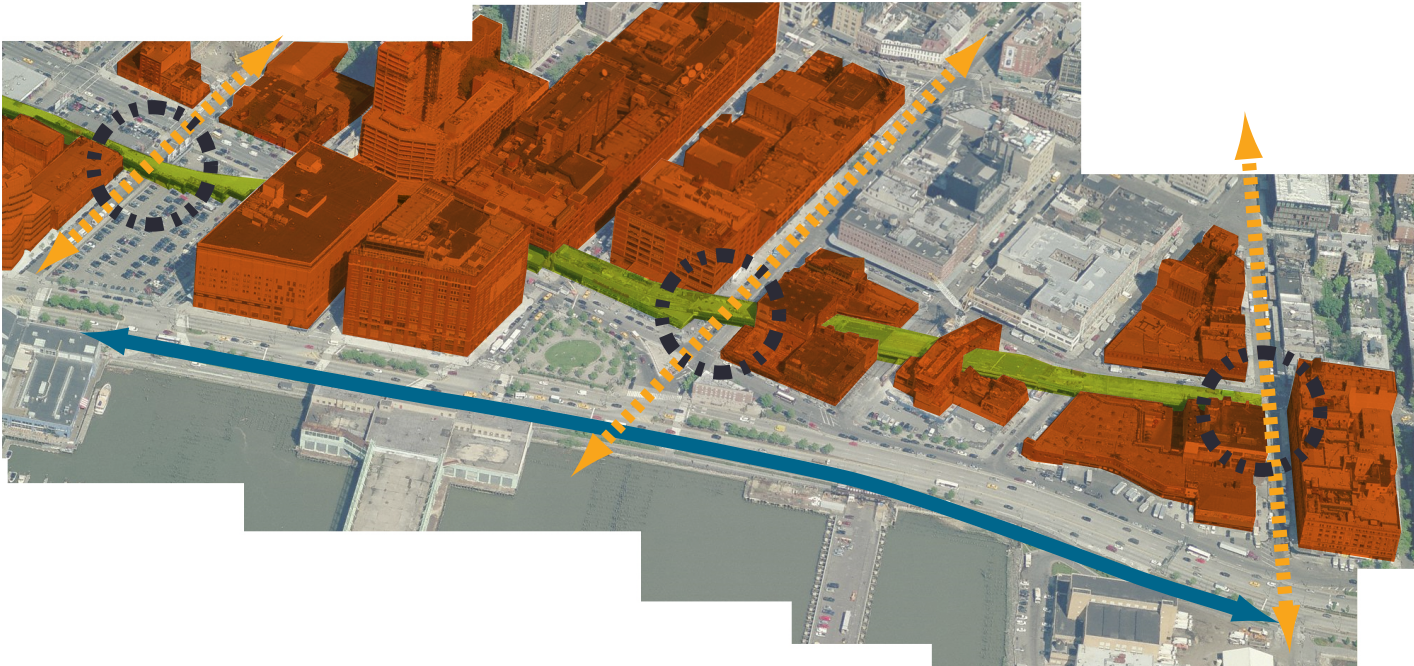


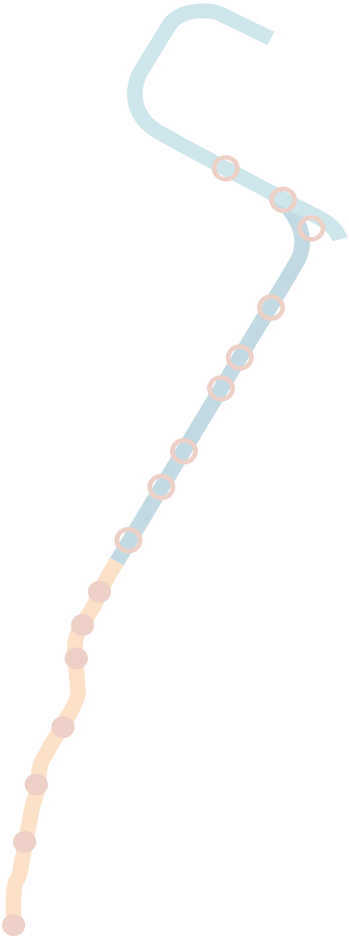
figure 3.39. catalyzing adjacencies along the High Line

Although the scale differences between the High Line and Smoky Hill contexts are vast, the strategies utilized are no less applicable. As seen in CPV, the necessity for establishing connections is extremely important; the Line, a corridor in nature, accomplishes this easily. Access points to the Line, however, observe important transportation nodes and respond accordingly to create perpendicular corridors.

The importance of the Friends of the River to the Smoky Hill is reflective of the importance the Friends of the High Line have had to the realization of the High Line Park. Their advocacy efforts within the community and with the City, as well as their continuing stewardship of the park and its programming, were and are crucial to the High Line’s success. In regards to Salina, continued measures of garnering community advocacy and City backing (both financially and politically) will be critical.

The concept of the Line as a base reagent is paramount. The programming responds to the district character, likely ensuring a strong connection and enhancement between program and district. While this is yet to be proven, estimates by New York City officials expect large revenues over 30 years; massive investment has already occurred along the corridor, and property values are estimated to have increased. Strategies for design along the Smoky Hill should reflect these observances. The analysis of a site’s character will produce programmatic elements that enhance

the site itself, invigorating urban surfaces. Furthermore, the addition of public space along the river, can catalyze the adjacent sites via the “Central Park Effect”, increasing property values and potentially invigorating development.



chapter 4: the river revisited

“To understand how a city works (or why it doesn’t work) and plan toward its improvement, it is helpful to dissect it into its various parts and to examine each part separately.”

-John Ormsbee Simonds, “Landscape Architecture: A Manual of Environmental Planning and Design”

chapter 4: site assessment

the river revisited

Friends of the River outreach

The Friends, in coordination with the City of Salina, Design Studios West (DSW), and Wright Water Engineers, prepared goals and objectives in the realms of economic development, education, environment, recreation and wellness, and community and neighborhoods, and how they pertain to the river (Brandes, 2009). During the summer of 2009, five days of public outreach were held at high profile sites and events; the results were an estimated 3500 to 4000 attendance count, 2753 solicited and mapped “desired river use” data inputs (dots placed by participants on a large map indicating where they would like to see focused renewal efforts and improvements), and 330 completed questionnaires (Brandes, 2009). Questionnaire responses showed that 90% agreed or strongly agreed with the goals and objectives created by the Friends, and 96% agreed or strongly agreed that the River Renewal effort was a good idea and should be continued (Brandes, 2009). The data from the community preferences map was summarized by Design Studios West in terms of the concentration of inputs, resulting in the following river reaches map shown in figure 4.01.

Figure 4.01, adapted from DSW’s map, reveals what portion of the data fell within what geographic area along the river, representing the percentage of community preference for additional program or redevelopment. The results split the historic channel into three reaches: the North, Central, and South reaches with 16%, 51%, and 22% community

preference, respectively, with the diversion channel representing 11% of respondents. These results help categorize and compare the reaches themselves, which assists in narrowing the scope of the analysis and design for this master’s report.

The selection of the central reach as a priority in analysis and design therefore becomes logical for this master’s report. The central reach received the highest percentage of community preference during the 2009 public outreach sessions, reflecting the majority of Salinians’ inclination to prioritize this reach for locating new river amenities. The central reach’s adjacencies to downtown Salina, as well as Founder’s, Oakdale, and Kenwood Parks, presents the opportunity to analyze how the river connects to these unique and important city features in terms of its physical, social, and landscape infrastructural connections.

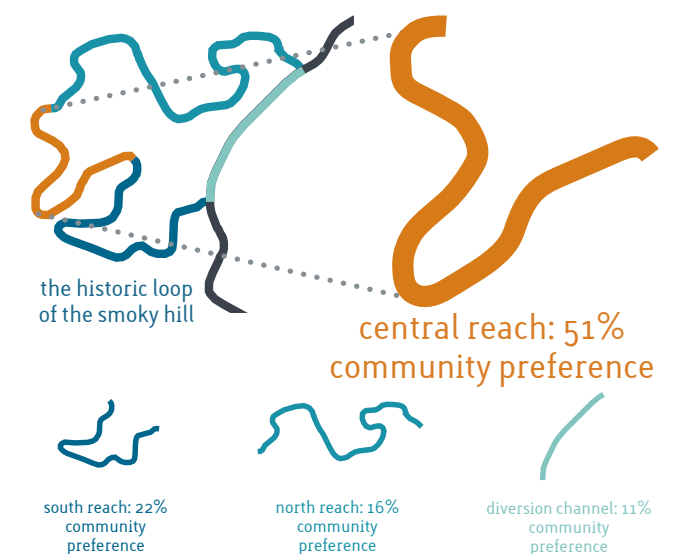


figure 4.01. selection by preference: the central reach

the central reach

methodology + central reach introduction

Continuing the same methods used to analyze the precedents, the inventory and analysis for the central reach will categorize and examine Salina’s existing urban surfaces. This yields insight to where different categories of the Friends’ programming are most appropriate, as well as how the strategies used in the case studies can be applied to the central reach. Figure 4.02 illustrates this process.

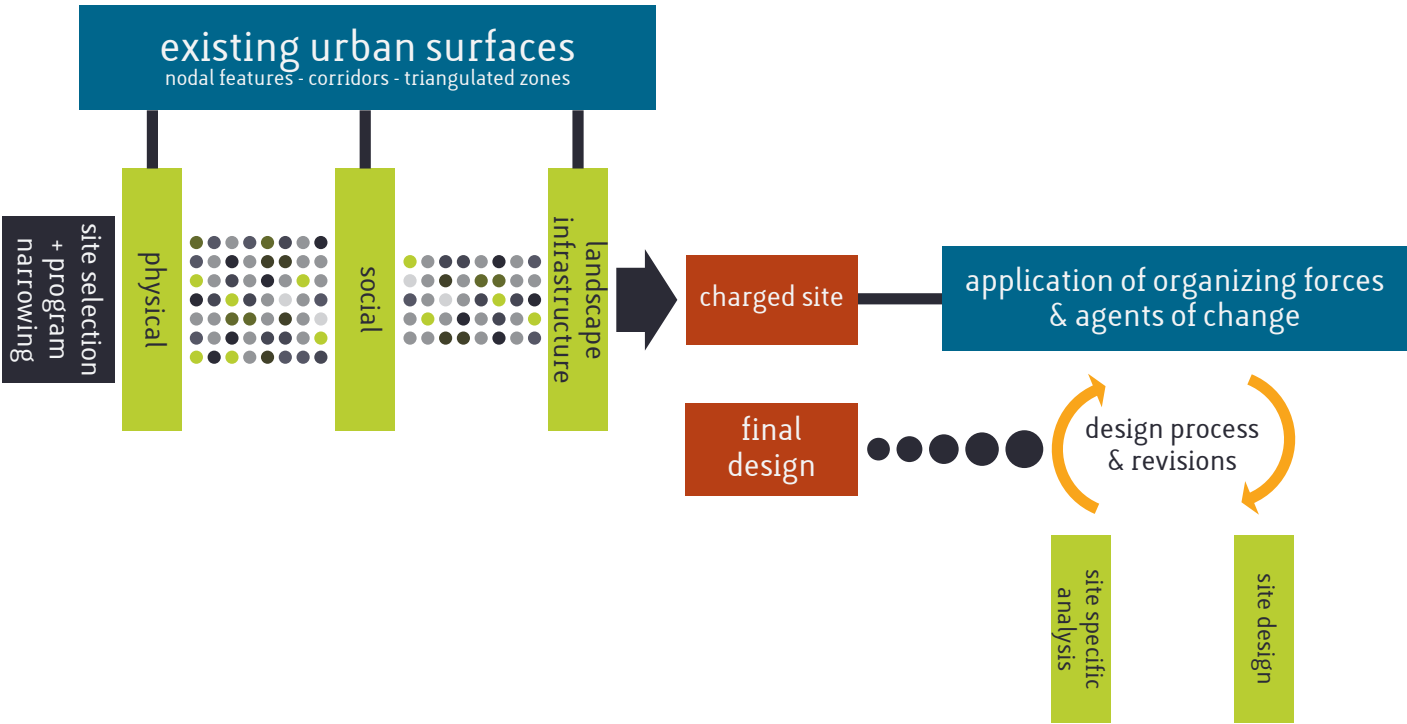


figure 4.02. the central reach inventory and analysis process methodology

The central reach represents a two mile reach of the Historic Smoky Hill channel. As previously mentioned, this reach runs adjacent to Oakdale and Kenwood Parks to the south and Founder’s Park to the north. Downtown Salina lies west of the middle of the reach, separated by a residential neighborhood, while another residential neighborhood lies to the east.

The quality of the central reach’s channel is characteristically different than the other three reaches. Utilizing Level I Stream Classification, a method of stream and river classification created by notable hydrologist Dave Rosgen, site observation suggests a wider and shallower channel with wider floodplains, with an average channel depth of 4.5 feet, a width of 50 feet, and a varying floodplain width of 100 to 330 feet (Rosgen 1996, 4:1-4:10). The variance of floodplain width is attributed to the

reach’s adjacency to Oakdale Park, where the banks are much more gradual in slope down to the water’s edge. Riparian vegetal massings frame the corridor and vary in density. The slope of the channel is extremely gradual; from the inlet pipe elevation at the Smoky Hill’s diversion to the crest of the old mill dam, there is four inches of grade change over the combined lengths of the south and central reaches of 3.79 miles. This near negligible slope has been a major determinant for sediment aggradation since the channel’s diversion.

The central reach also has six of the seven bridges that span the historic channel over its course through Salina: the Oakdale, Mulberry, and Walnut Street Bridges (streets) and three footbridges. All other street-river crossings are facilitated by culverts.

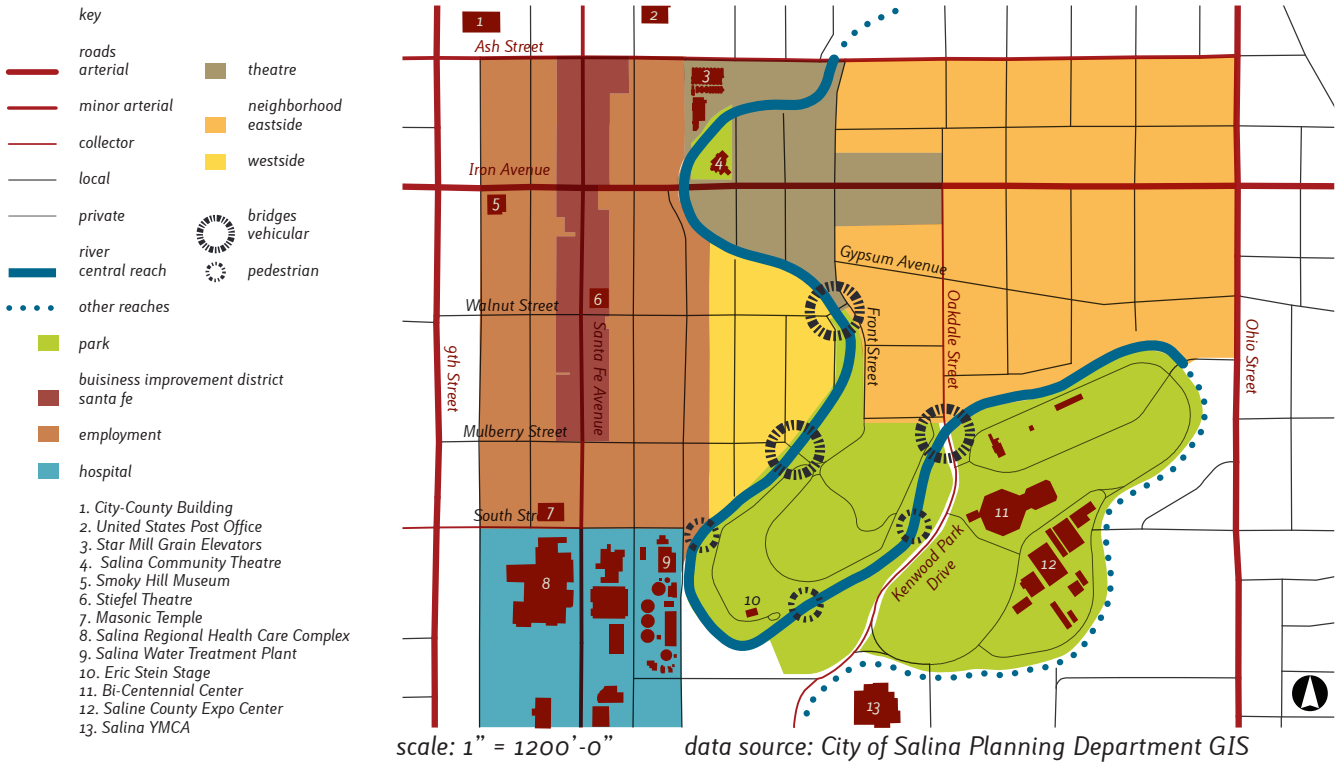


figure 4.03. location diagram of significant central reach features

the central reach

visual inventory: river edge

These images illustrate the existing edge character of the channel along the central reach.

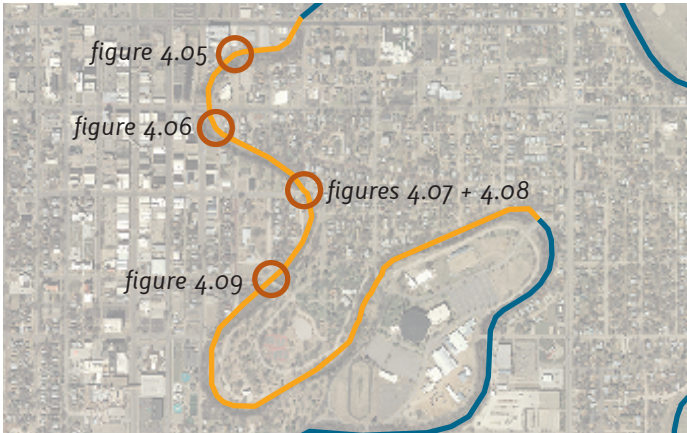


figure 4.04. river cross section image location key



figure 4.07. river cross section at Walnut Street Bridge, looking north



figure 4.08. river cross section at Walnut Street Bridge, looking south



figure 4.05. pool cross section at the top of the Old Mill Dam, looking east



figure 4.09. river cross section at Mulberry Street Bridge, looking northwest



figure 4.06. river sub-reach edge condition, just south of the Iron Avenue culvert, looking west

the central reach

visual inventory: oakdale + kenwood park

Oakdale Park is a 45 acre park with passive and active park amenities including Botanical Gardens, tennis courts, playgrounds, and a performance stage. Kenwood Park is 65 acres; four acres of which is similar in character to Oakdale, while the other parcel holds the Bi-Centennial Center, Municipal Pool, and the Saline County Expo Center and Fairgrounds. The two parks act as hosts to events with municipal, regional, and national pull.

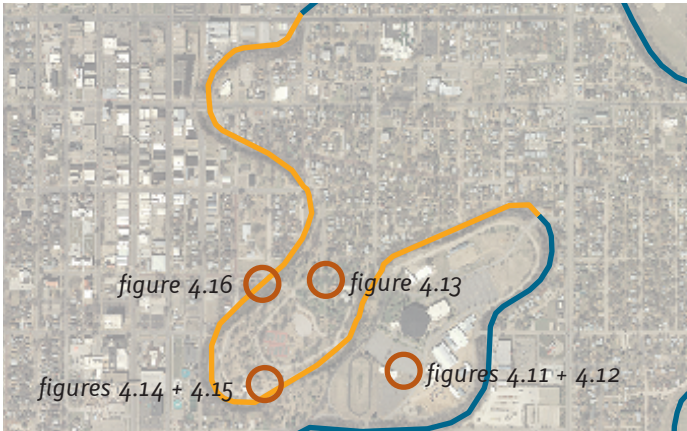


figure 4.10. oakdale + kenwood park image location key



figure 4.13. the Salina Botanical Gardens in Oakdale Park, looking south



figure 4.14. Eric Stein Stage in Oakdale Park, looking southwest



figure 4.11. a portion of the Saline County Expo Center complex in Kenwood Park, looking northeast



figure 4.15. pedestrian bridge over the Smoky Hill at Oakdale Park, looking northeast



figure 4.12. the Bi-Centennial Center, in Kenwood Park, looking north



figure 4.16. a view of the river within the drained channel along the banks near Oakdale Park, looking northeast

the central reach

visual inventory: downtown salina

Santa Fe Avenue acts as downtown Salina’s major corridor characterized by retail, office, and light mixed-use residences. Many of Salina’s civic, arts, and cultural entities are also located downtown as well.

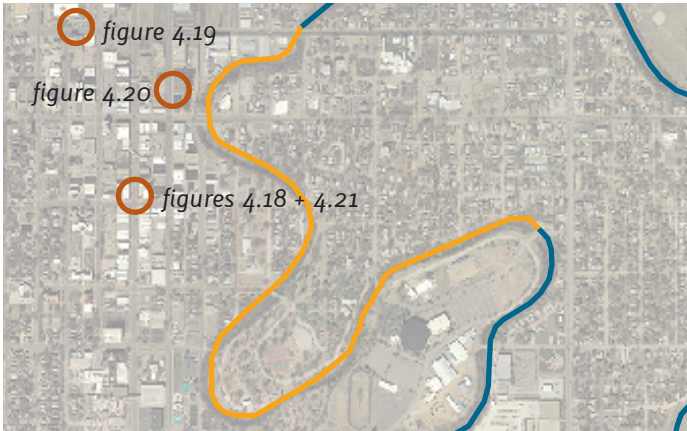


figure 4.17. downtown Salina image location key



figure 4.19. the Saline County Courthouse off Ash Street in downtown Salina, looking north



figure 4.20. decaying infrastructure in downtown Salina near the Old Mill, looking east



figure 4.18. the Stiefel Theatre on the corner of Santa Fe Avenue and Walnut Street in downtown Salina, looking northeast



figure 4.21. Santa Fe Avenue in downtown Salina, looking north

the central reach

visual inventory: founder's park

A one acre park directly adjacent to the site of the historic Old Mill Dam and the Salina Community Theatre, north of the Iron Street crossing. Park usage is primarily passive in nature.



figure 4.22. Founder's Park image location key



figure 4.24. Founder's Park and the Salina Community Theatre north of Iron Avenue, looking north



figure 4.25. Founder's Park riverside trail, just south of the riverbank, looking southwest



figure 4.23. a view of the river and grain elevators north of the Iron Avenue culverts, looking north



figure 4.26. the Old Mill Dam and grain elevators, looking northwest

the central reach

visual inventory: adjacent neighborhoods

Two medium to low density residential neighborhoods exist on the east and west sides of the river. Architecturally the area is a mix of styles: Arts and Crafts, Post-War Ranch, and Folk Victorian are representative.

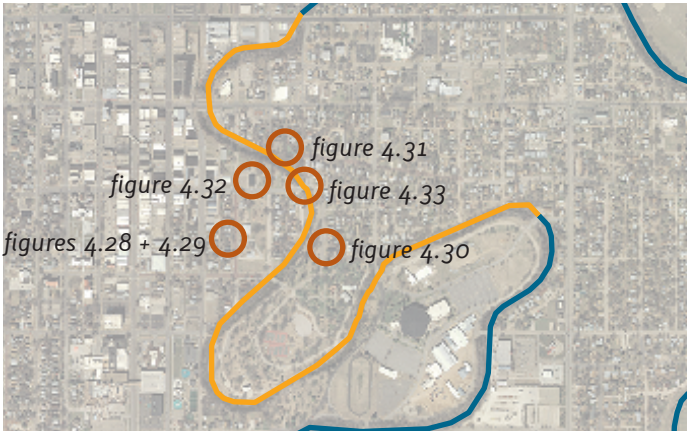


figure 4.27. adjacent neighborhood image location key



figure 4.31. a view from the Walnut Street Bridge of the eastside neighborhood, looking northeast



figure 4.32. poorly defined street corridor and underused site in the westside neighborhood, looking north



figure 4.28. typical house in the westside neighborhood



figure 4.29. typical house in the westside neighborhood



figure 4.30. houses along Front Street facing the river, looking east



figure 4.33. houses along Front Street near Oakdale Park in the eastside neighborhood, looking north

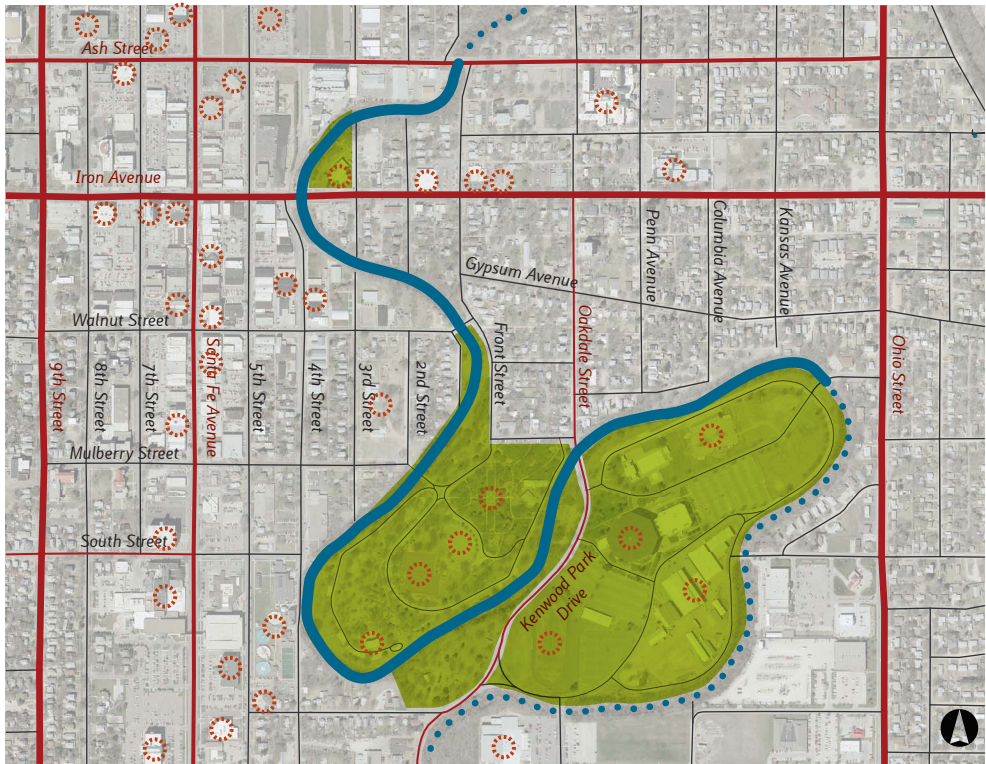
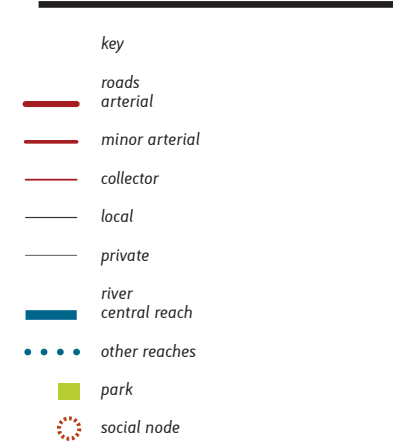
the central reach

physical connections

street networks + districts

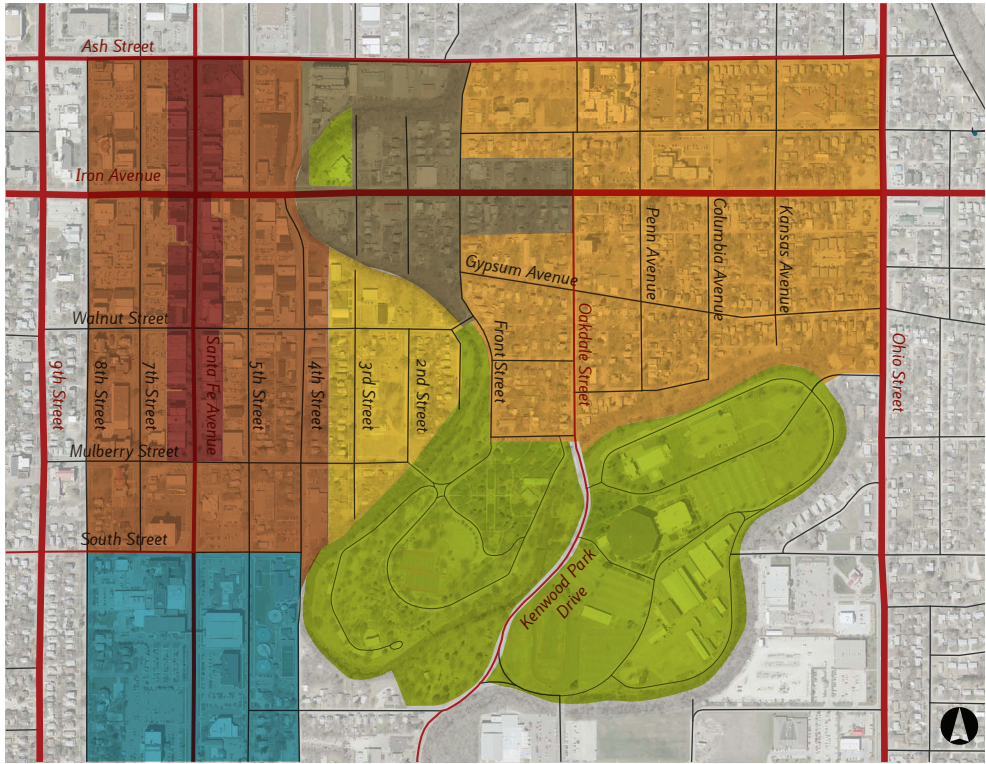
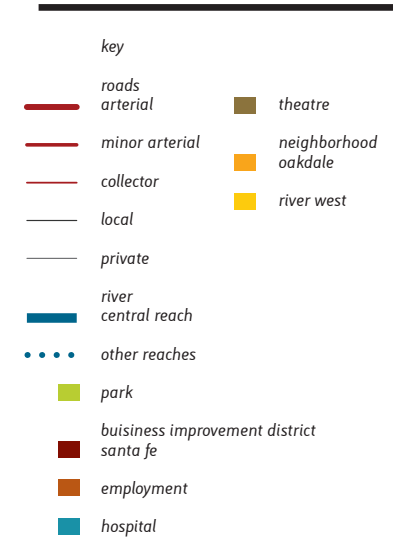
Figures 4.34 and 4.35 inventory the existing hierarchy of road networks in relation to the central reach’s adjacent districts and its varied social nodes. The central reach is thick in cultural sites, including the city’s two largest parks and the downtown business improvement district. North-south connectivity on the west side of the river, in downtown Salina, is facilitated by the minor arterial Santa Fe Avenue, a typical main street with sidewalks. Outside of Santa Fe, however, connectivity becomes less hospitable and/or engaging; between the parks and the other cultural nodes pedestrians must travel along either busy arterials or local streets. Major east-west connectivity across the river is facilitated by the arterial Iron Avenue, and local streets Walnut and Mulberry.

figure 4.34. street connectivity + social nodes



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.35. street connectivity + districts



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

the central reach

soial connections

zoning + land use

The existing zoning and future land use, as well as the future land use maps, illustrate the regulatory land conditions of the urban surfaces around the central reach. Development considerations of the current and future uses of land, as well as what zoning policies are in place, will be influential in considering how program and new land uses can be implemented and compliment adjacent development.

figure 4.36. existing zoning

- key
- C-1: Restricted Business
 - C-2: Neighborhood Shopping
 - C-3: Shopping Center
 - C-4: Central Business
 - C-6: Heavy Commercial
 - PC-1: Planned Commercial
 - PC-3: Planned Commercial
 - PC-5: Planned Commercial
 - H-M: Hospital
 - I-2: Light Industrial
 - R-1: Single-Family Residential
 - R-2: Multiple Family Residential
 - R-2.5-3: Multiple Family Residential
 - R-S: Single-Family Residential Suburban



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.38. future land use

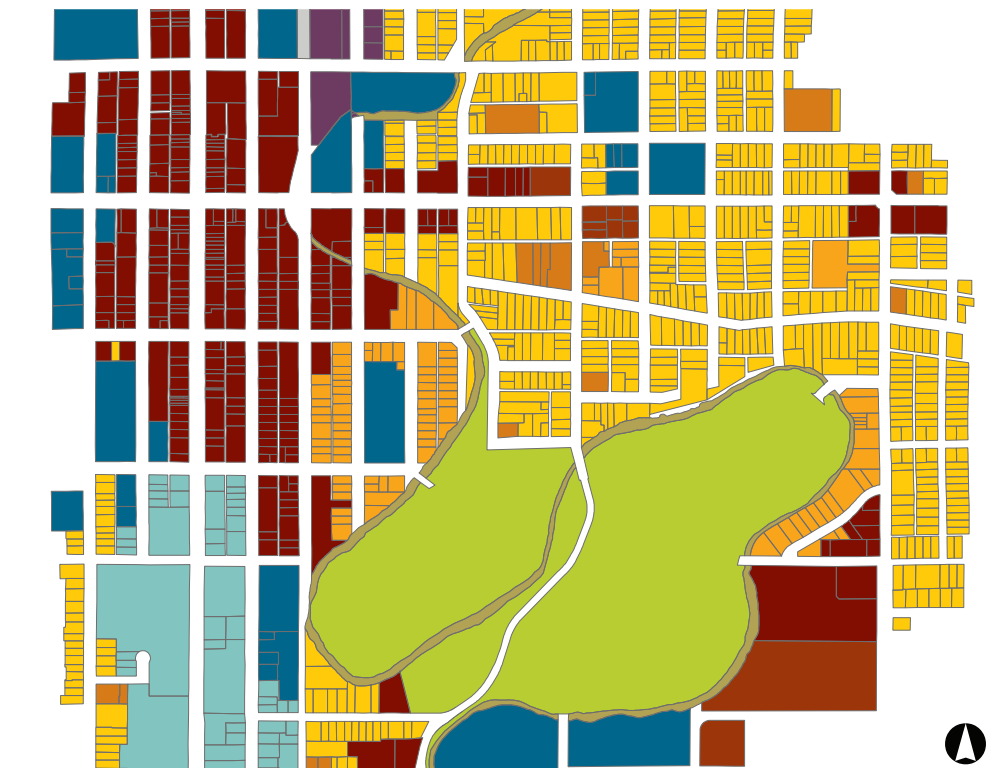
- key
- commercial
 - office
 - downtown
 - employment
 - suburban residential
 - urban residential
 - public
 - hospital
 - park



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.37. existing land use

- key
- commercial
 - office
 - industrial
 - residential: high density
 - residential: medium density
 - residential: low density
 - civic
 - hospital
 - park
 - natural areas
 - rail ROW



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

the central reach

social connections

parcel ownership

An analysis of parcel ownership gives insight on how land development can be implemented. For example, larger parcels adjacent to city owned land suggests a possibility for public/private partnerships between the city and large land owners, who are generally corporations, partnerships, or limited liability corporations (LLCs); also, smaller, privately owned contiguous parcels suggest locations for acquisition and land assembly, appealing more to developers of denser projects.

figure 4.39. parcel ownership

- key
- single owners
 - corporations, partnerships, associations
 - trusts
 - public



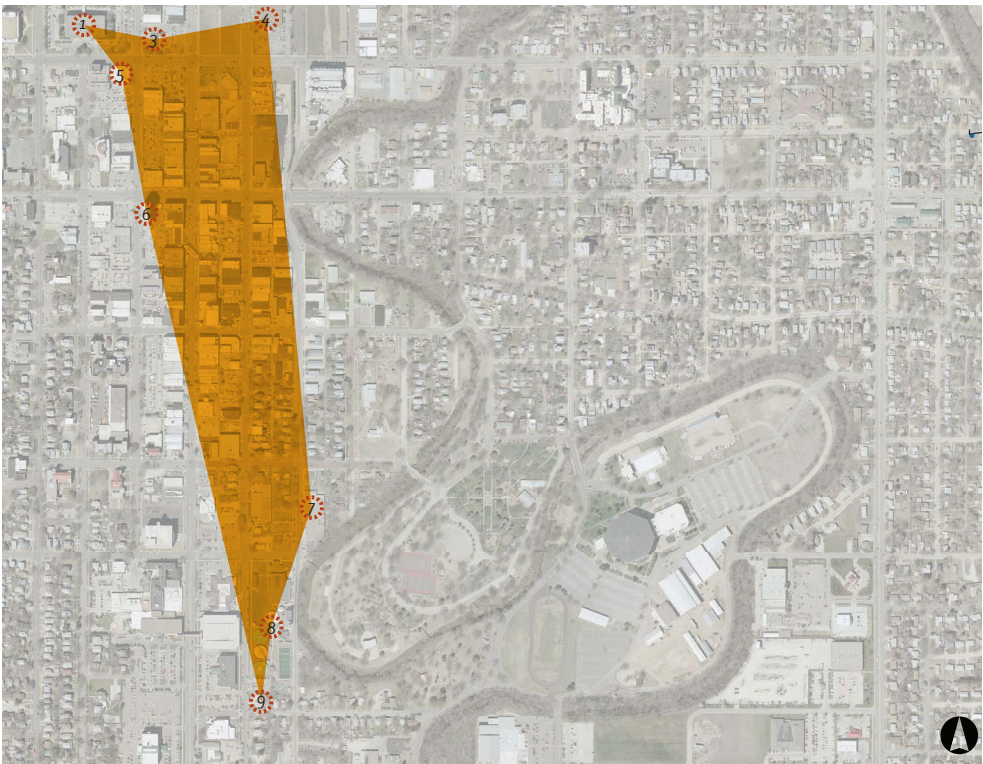
scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

social node triangulation

The series of triangulation maps represent the intangible “webs” of like cultural program or activities across the central reach. Because of the perceived lack of connection amongst these social nodes, mapping connections between institutions with like-program becomes useful for predicting areas steeped in a certain type of program. This informs the level and type of programmatic charge the area holds. The final overlapped triangulation illustrates the areas that are densest in terms of programmatic potentials. Dotted lines outline the areas formed between isolated and clustered nodes.

figure 4.40. civic triangulation

- key
1. Salina City/County Building
 2. Salina Public Library
 3. Salina Area Chamber of Commerce
 4. United States Post Office
 5. Salina Downtown, Inc.
 6. Kansas Dept of Human Resources
 7. Salina Journal
 8. Salina Water Treatment Facility
 9. Salina Housing Authority



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.41. health + wellness triangulation

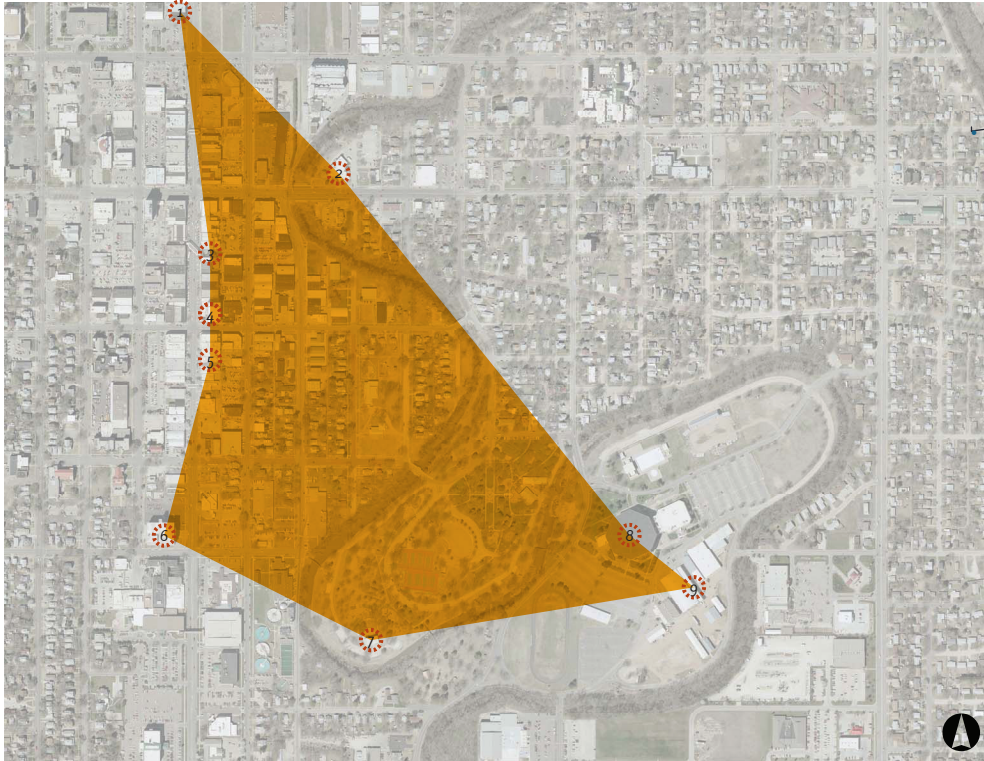
- key
1. Salina Regional Health Center (Penn Campus)
 2. Salina Regional Health Center (Santa Fe Campus)
 3. Oakdale Park (Tennis Courts)
 4. Santa Fe Medical Plaza
 5. Kenwood Park (Kenwood Cove Aquatics Center)
 6. Salina Medical Arts Building
 7. Tammy Walker Cancer Center
 8. Salina YMCA



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.42. venue triangulation

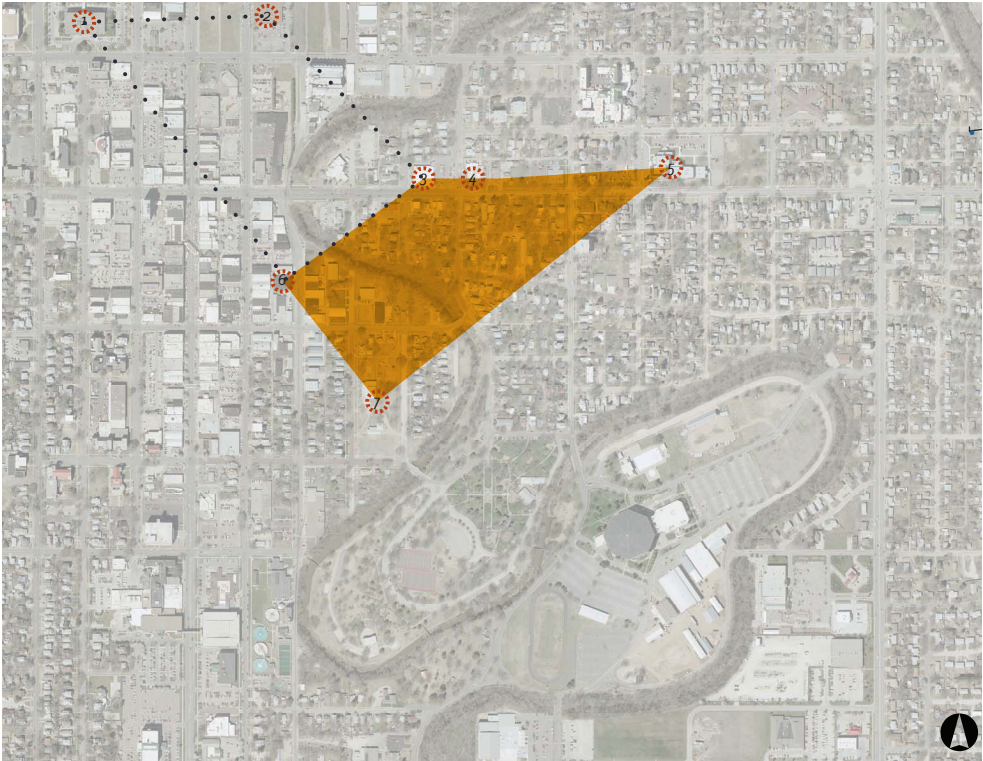
- key
- 1. The Paramount
 - 2. Salina Community Theatre
 - 3. Campbell Plaza
 - 4. Stiefel Theatre for the Performing Arts
 - 5. OneEleven Ultralounge
 - 6. Masonic Temple
 - 7. Oakdale Park (Eric Stein Stage)
 - 8. Kenwood Park (Bicentennial Center)
 - 9. Kenwood Park (Saline County Expo Center)



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.44. community services triangulation

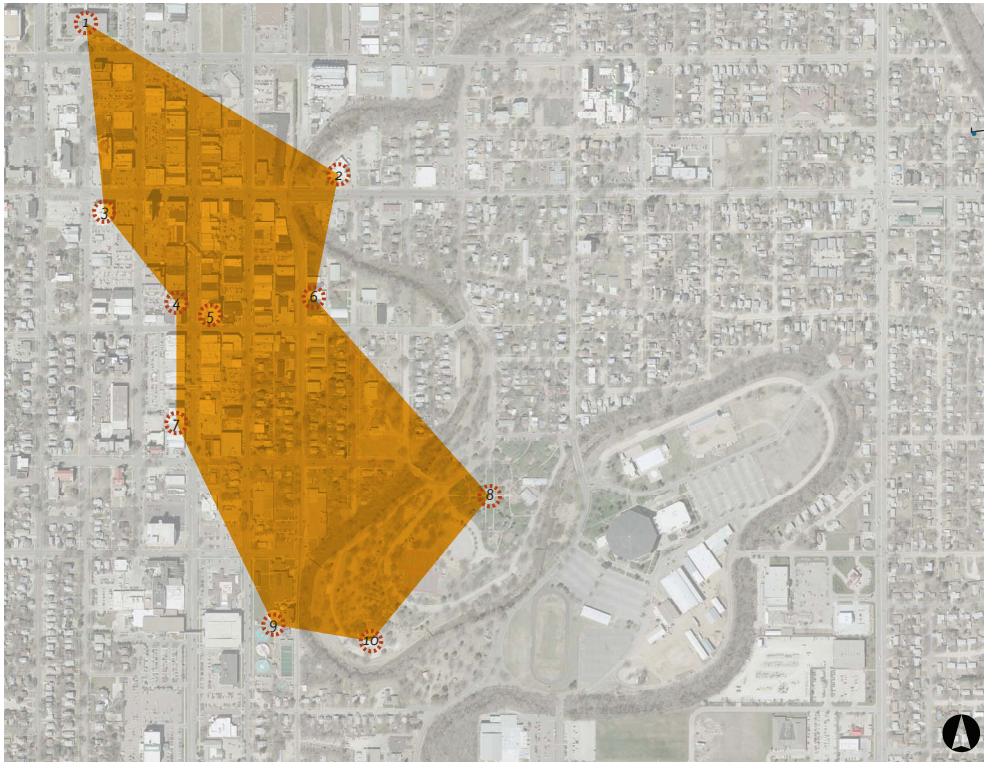
- key
- 1. Salina Public Library
 - 2. United States Post Office
 - 3. Dillon's Grocery
 - 4. B & K Prescription
 - 5. Oakdale Elementary School
 - 6. Prairieland Market
 - 7. Opportunity Now Education Center



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.43. arts triangulation

- key
- 1. Salina Public Library
 - 2. Salina Community Theatre
 - 3. Smoky Hill Museum
 - 4. Salina Art Center (Cinema)
 - 5. Stiefel Theatre for the Performing Arts
 - 6. Salina Art Center (warehouse gallery)
 - 7. Salina Art Center (main building)
 - 8. Oakdale Park (Botanical Gardens)
 - 9. Salina Water Treatment Facility (Public Art)
 - 10. Oakdale Park (Eric Stein Stage)



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.45. overlapped triangulations



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

the central reach

landscape infrastructural connections

stormwater infrastructure

The historic channel of the Smoky Hill, as evidenced by this map, is a critical element in Salina’s internal stormwater drainage. The central reach receives urban runoff from practically all of downtown to the west, and minor runoff from areas on the east side of the river. The outfall locations along this reach would offer prime locations for stormwater best management practices (BMPs). Depending upon the selected location, the BMP implementations could prove valuable as learning or demonstrative examples of sustainable stormwater management.

floodplain

The DFIRM, or digital flood insurance rate map, is a document produced by FEMA for purposes of identifying areas prone to flooding and the flood’s corresponding frequency. Although the flood areas within the central reach are primarily contained within the river corridor, edge and nodal treatments that act to retain stormwater or maximize water discharge and flow will be useful for alleviating flooding issues up and downstream of the central reach.

figure 4.46. stormwater infrastructure

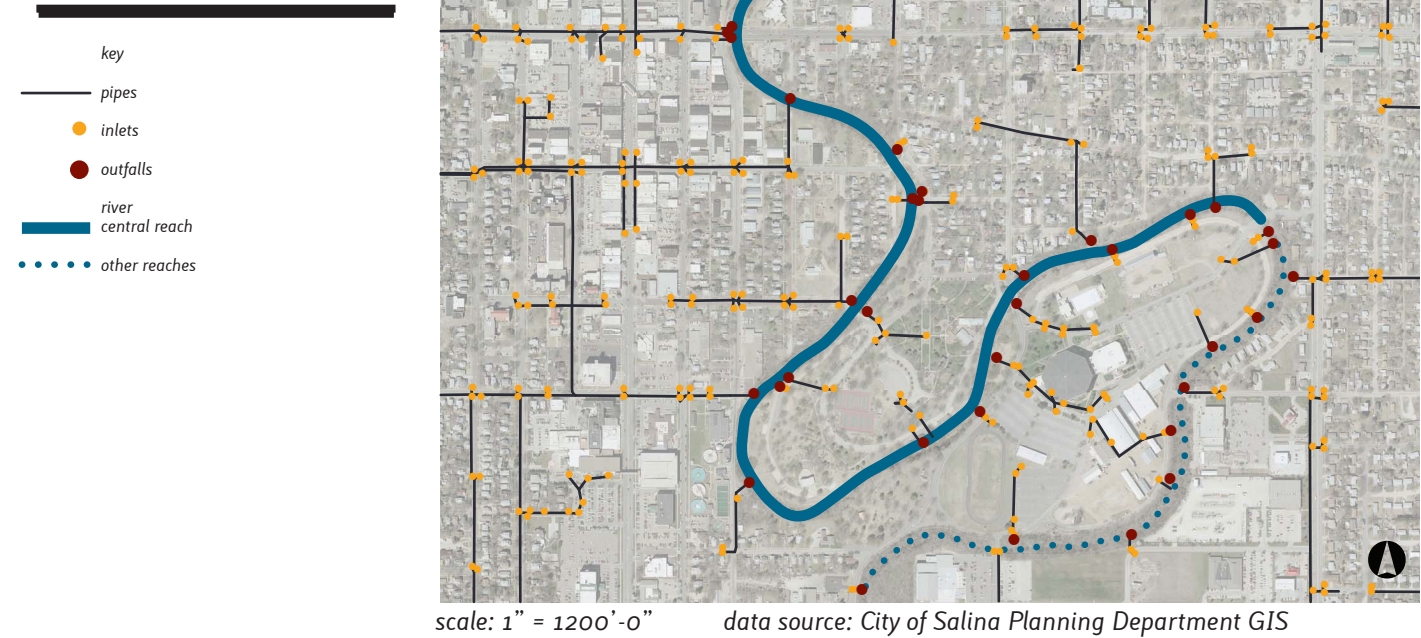
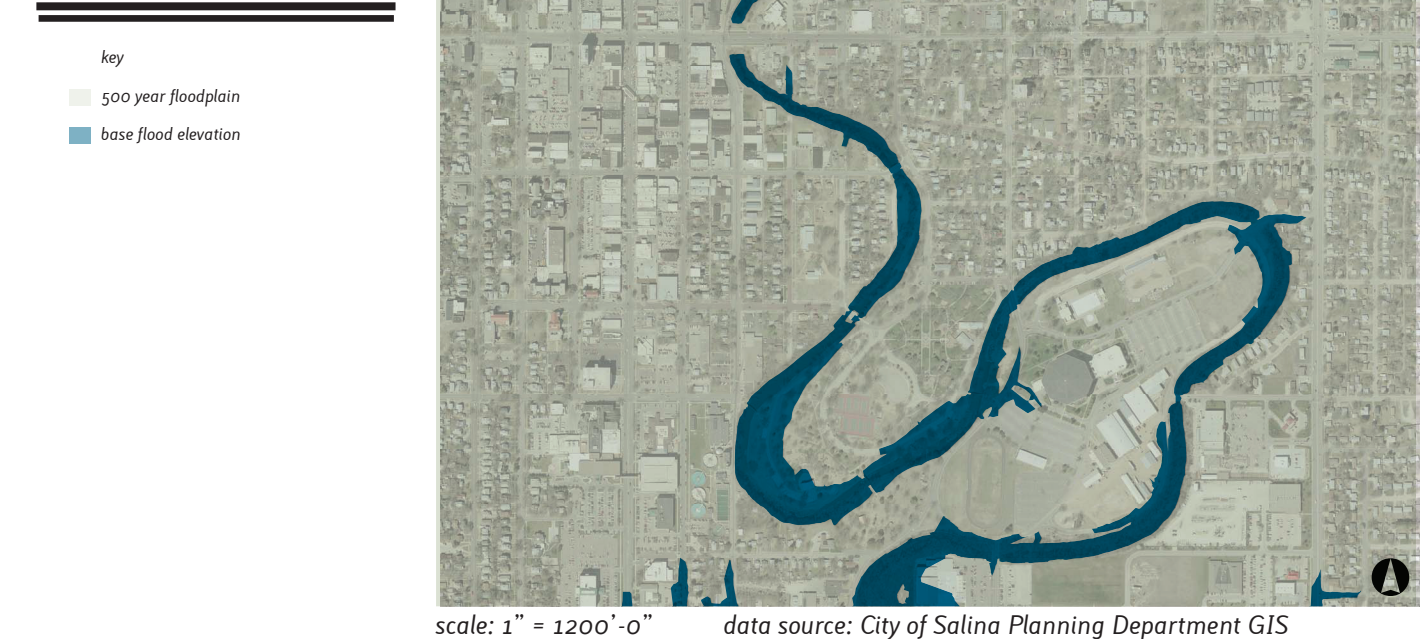


figure 4.47. DFIRM



the central reach

overlapped crossmappings

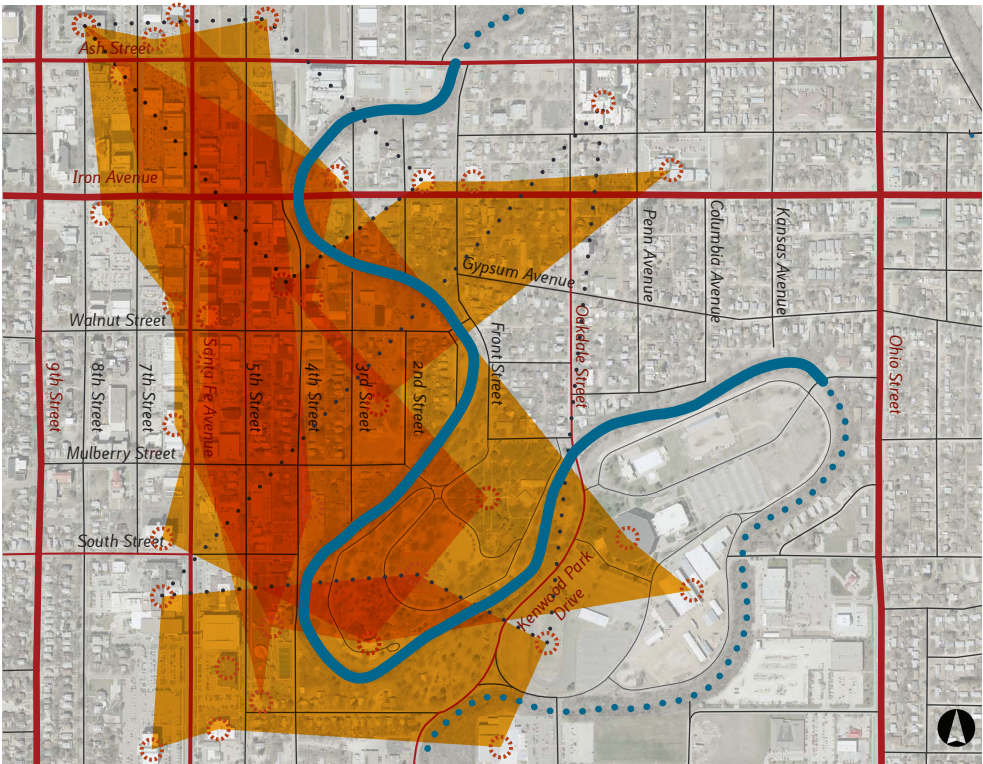
triangulations and physical connections

The overlap of the triangulations and physical connectivity maps suggests where appropriate locations of particular programmatic categories would facilitate the integration between physical and social connectivity.

triangulations and stormwater infrastructure

Similar to the previous crossmapping, figure 4.49 illustrates similar connotations between stormwater infrastructure and social webs.

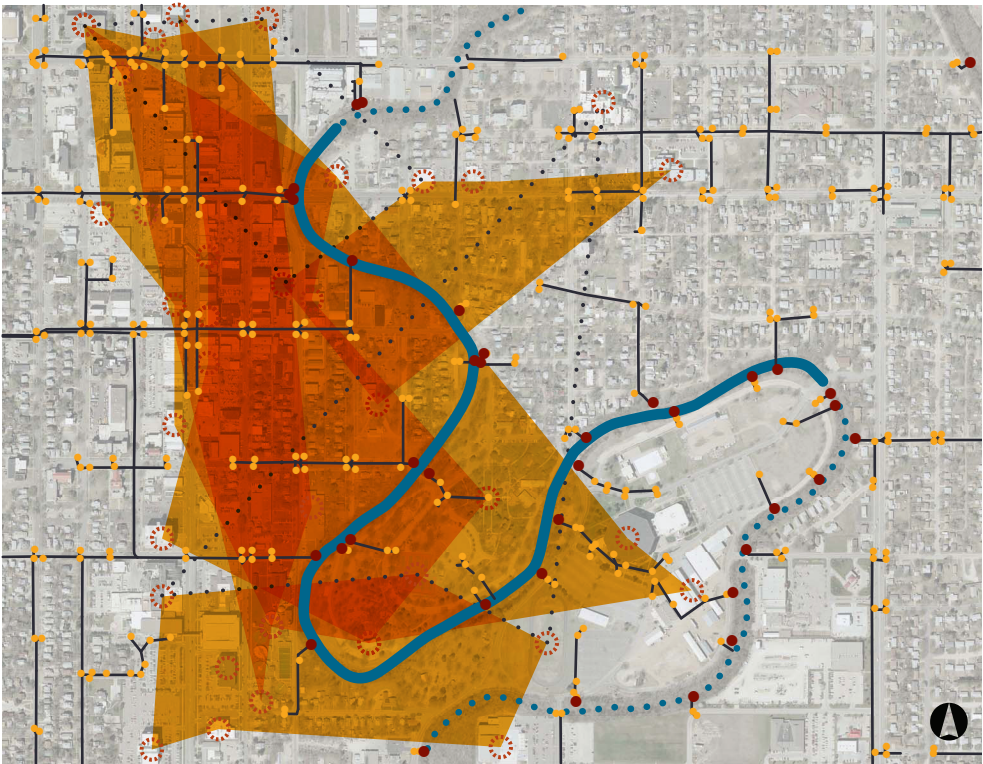
figure 4.48. crossmapping: social triangulations + physical connectivity



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

figure 4.49. crossmapping: social triangulations + stormwater infrastructure

- key
- pipes
- inlets
- outfalls
- river
- central reach
- other reaches



scale: 1" = 1200'-0" data source: City of Salina Planning Department GIS

the central reach

selecting an area of focus

The results of the inventory and analysis mapping yield much insight to appropriating programming, densities, and linkages along the central reach. One important observation, however, is the portion of the central reach which is most connected to physical, social, and landscape infrastructural urban surfaces, identified as a dark overlay in figure 4.50.

This portion of the central reach then becomes the focus for the programming and design response in order to best illustrate the Smoky Hill’s catalytic potential. This is not to say minor program elements, especially those facilitating connections northward and southward along the central reach, will be ignored. Rather, these extension elements will be identified within their appropriate connective programmatic system, stemming from the focus area sites.



figure 4.50. central reach site selection

chapter 5: design response

“The contemporary American landscape is magical and, at times, beautiful. The collision and layering of the pieces of today’s landscape, like fragments of our perplexing and complex social self, are yielding a remarkable mosaic, one that speaks with clarity and power to the interwoven and complex relationships between our culture and land.”

-Michael Van Valkenburgh, “Taking Measures Across the American Landscape”

chapter 5: design response

base reagents + connections + entity involvement + Central Park Effect

The central reach design response should utilize, in various singular and combinatory ways, the aforementioned strategies that were identified as key to the precedent projects’ successes. These four strategies are: 1) regeneration/invigoration of the river corridor as a base reagent for catalyzing adjacent land; 2) facilitating connections and relationships, physically and figuratively; 3) encouraging public/private entity involvement along the corridor in innovative ways; 4) employing the “Central Park Effect” to act as the catalyst for change.

Regeneration/invigoration of the river corridor as a base reagent for catalyzing adjacent land can be applied in Salina through the treatment of the river corridor’s edge conditions: implemented design program, construction or renewal of the river banks, and development along adjacent parcels.

Physically and figuratively facilitating connections and relationships in Salina would entail the utilization of the river as a corridor of transportation, as well as providing program that various Salina entities can have a vested interest in; the latter of which also acts to encourage public and private entity involvement.

Encouraging public/private entity involvement along the corridor in innovative ways could be applied in Salina if the City strategized ways private land owners can accomplish development goals through innovative business and regulatory processes.

Employing the “Central Park Effect” to act as the catalyst for change in Salina presumes the City employs a strategy that allows the river edge treatment to exhibit the “Central Park Effect”, catalyzing development and connectivity further.

critical assumptions

The critical technical assumptions about the river corridor establish the baseline conditions for design consideration. These assumptions, established by the author utilizing channel cross section comparisons, site observation, and statements by Wright Water Engineer consultants, are as follows:

- i. average river width: 50’
- ii. average river depth: 4.5’
- iii. average river discharge: 40 cfs
- iv. high flow conditions in the river channel will reflect the

current FEMA DFIRM 100 yr floodplain zone; discharge is variable based on storm intensity

- v. low flow conditions in the river channel will decrease discharge to 10 cfs; volume will “rely upon a secondary dam and recirculation system”
- vi. drought conditions, in the most extreme cases, will be assumed as no water in the channel
- vii. periodic flow allowances of 100 cfs for channel sediment flushing

(Clouston 2010)

programming the river

nodes + reaches

river nodes



1. Old Mill Node

- arts and cultural riverside use with mixed-use retail
- outdoor performance venue
- public art displays
- utilization of dam as monumental water feature
- adaptive reuse of grain elevators as vertical defining element along corridor
- pedestrian bridge across river to link both banks, possibly incorporated into water feature
- possible annex of the Smoky Hill Museum within complex

2. Iron Avenue Bridge Node

- replace Iron Avenue culverts with bridge to allow trail and boat passage while alleviating river flow choke point
- enhance the node as a vehicular arterial gateway from east to west
- incorporate public art into gateway due to its high profile

3. 3rd Street Esplanade Plaza Node

- heavy water based recreation uses
- plaza and esplanade spaces with retail frontage
- demonstrative BMP wetlands in high-profile area
- pedestrian bridge across channel

4. Walnut Street Node

- gateway between neighborhoods over bridge, celebrated with public artwork
- community forum/plaza adjacent to bridge and community center

- riverfront recreation and wellness complex, possibly associated with Salina Regional Health Center or YMCA

5. Mulberry Street Node

- Gateway to Oakdale Park to be enhanced
- trailhead opportunities
- enhance viewing opportunities toward Oakdale and northward

6. South Street Wetland Node

- pedestrian bridge across river to be enhanced
- utilize node as a link between Salina Regional Health Center and river wellness programs by incorporating a gathering space, boat launch, trailheads

river sub-reaches



1. Founder’s Park Arts + Humanities District

- arts programmed hardscaped riverwalk with mixed use retail and live/work artist lofts
- Founder’s Park and the Community Theatre across the river contrast the hardscape of the opposing bank
- extension of water recreation along 3rd street node with safety buffer near dam
- stormwater BMP located near Iron Avenue outfall

2. 3rd Street Esplanade North

- hardscape riverwalk environment fronted with shops, restaurants, and other retail while accommodating other mixed uses
- water based recreation opportunities along banks
- high activity pedestrian spaces

3. 3rd Street Esplanade South

- transition zone from dense commercial and retail, hardscape riverwalk to more residential, softscape/ ecological river channel
- river trails adjacent to apartments/condos/row houses
- fitness trailheads and exercise stops/rest zones

4. Front Street Promenade

- extension of Oakdale Park, with wide banks for passive recreation and multi-use trails
- widening of channel and creation of wetland oxbows to mitigate and increase the stormwater retention capacity during high flow

5. Oakdale Park Extension

- implement wetlands to mitigate stormwater flow

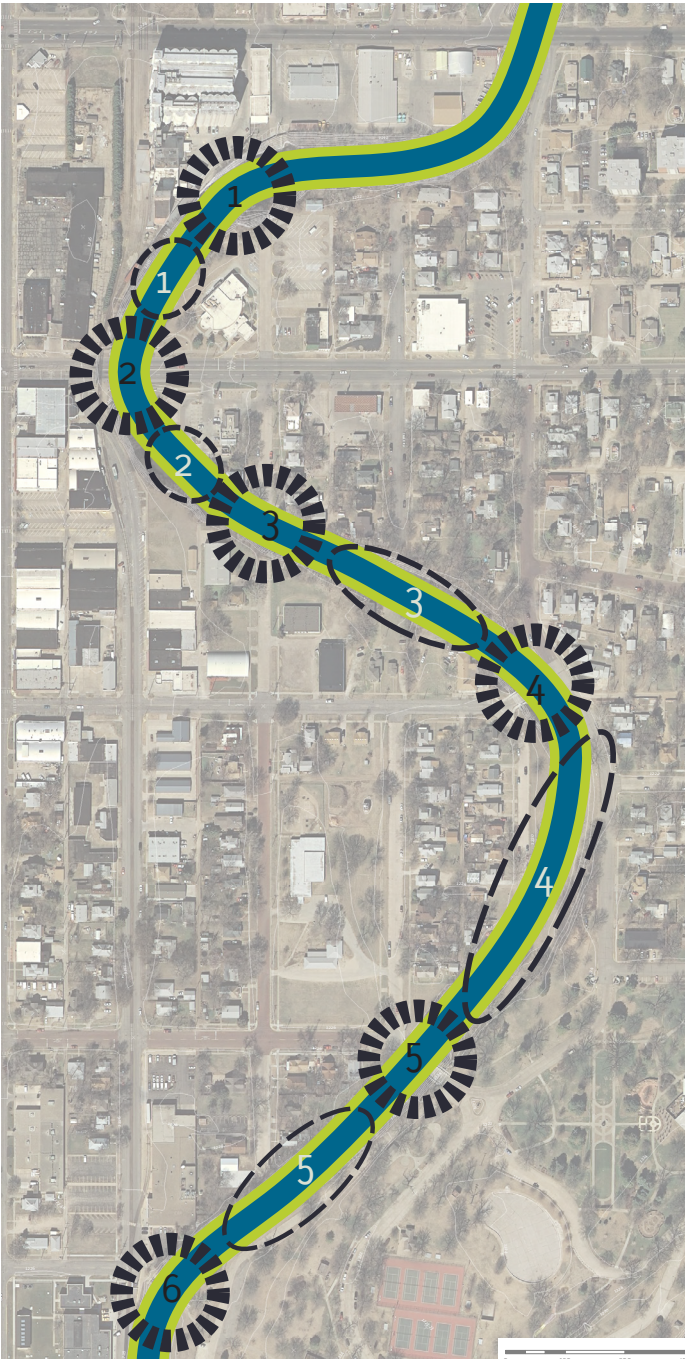


figure 5.01. central reach nodes and sub-reaches diagram

from outfall

- incorporate area as an outdoor water quality research lab for Salina Waterworks and other educational institutions
- design wetland views into Oakdale can spur office re-interest in the area and increase real estate values

catalyzing adjacencies

natural sciences + resource management education

The combined systems of the BMPs and the river walks and trails create a powerful tool for science and resource education that can be implemented into educational curriculums around Salina. The BMPs demonstrate the function and value of stormwater management, while the range of BMP types grants designed variety. The connective trail offers an ideal route for the observation of the BMPs, culminating at the South Street Node Outdoor Laboratory and Water Treatment Plant.

BMP character descriptions

1. South Street Node Wetland

- 5yr: 697 cfs/25yr: 1,161 cfs/100yr 1,664 cfs
- This outfall discharges the largest amount of water within this portion of the central reach. Due to the water volumes, and the fact that the outfall exists along park space, one reasonable BMP solution for mitigating high flows would be the implementation of a treatment train of wetlands or detention ponds along the river.

2. Mulberry Street Treatment Train

- incorporated into South Street Node treatment train

3. Front Street Treatment Train

- incorporated into South Street Node treatment train

4. 3rd Street Esplanade Plaza Raingardens

- 5yr: 158 cfs/25yr: 280 cfs/100yr 392 cfs
- The outfall along the 3rd Street node, though less in volume than the South Street outfall, is still significant in peak flow. A portion of this runoff can be diverted into raingardens or other BMPs designed into public spaces as demonstrative stormwater

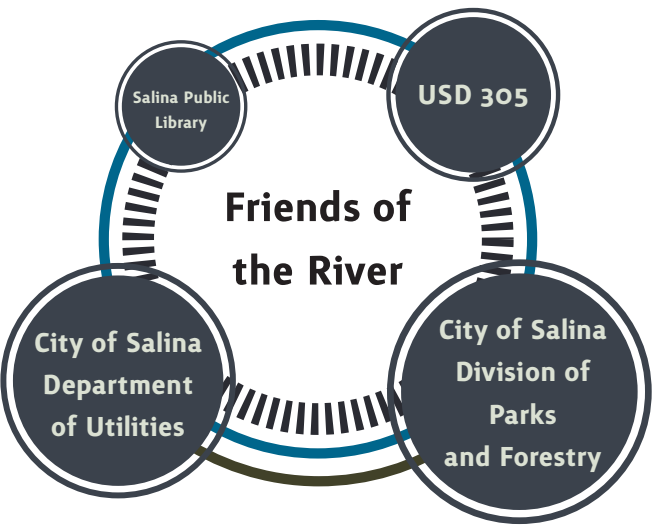


figure 5.02. natural sciences + resource management agencies

management systems. Point source stormwater management can also be implemented within this development area in the forms of greenroofs, greywater systems, and bioswales to alleviate the peak runoff volumes in this area.

5. Iron Avenue Node

- 5yr: 109 cfs/25yr: 196 cfs/100yr: 271 cfs
- BMP implementation strategies at this node follow similar protocol as the 3rd Street node, however a larger emphasis should be placed on the designed qualities of the BMPs to reflect the artistic nature of the Founder's Park sub-reach and Old Mill node.

6. Old Mill Node

- 5y: 181 cfs/ 25yr: 325cfs / 100yr : 450 cfs
- The BMP typology at this node should embody that of a constructed wetland.

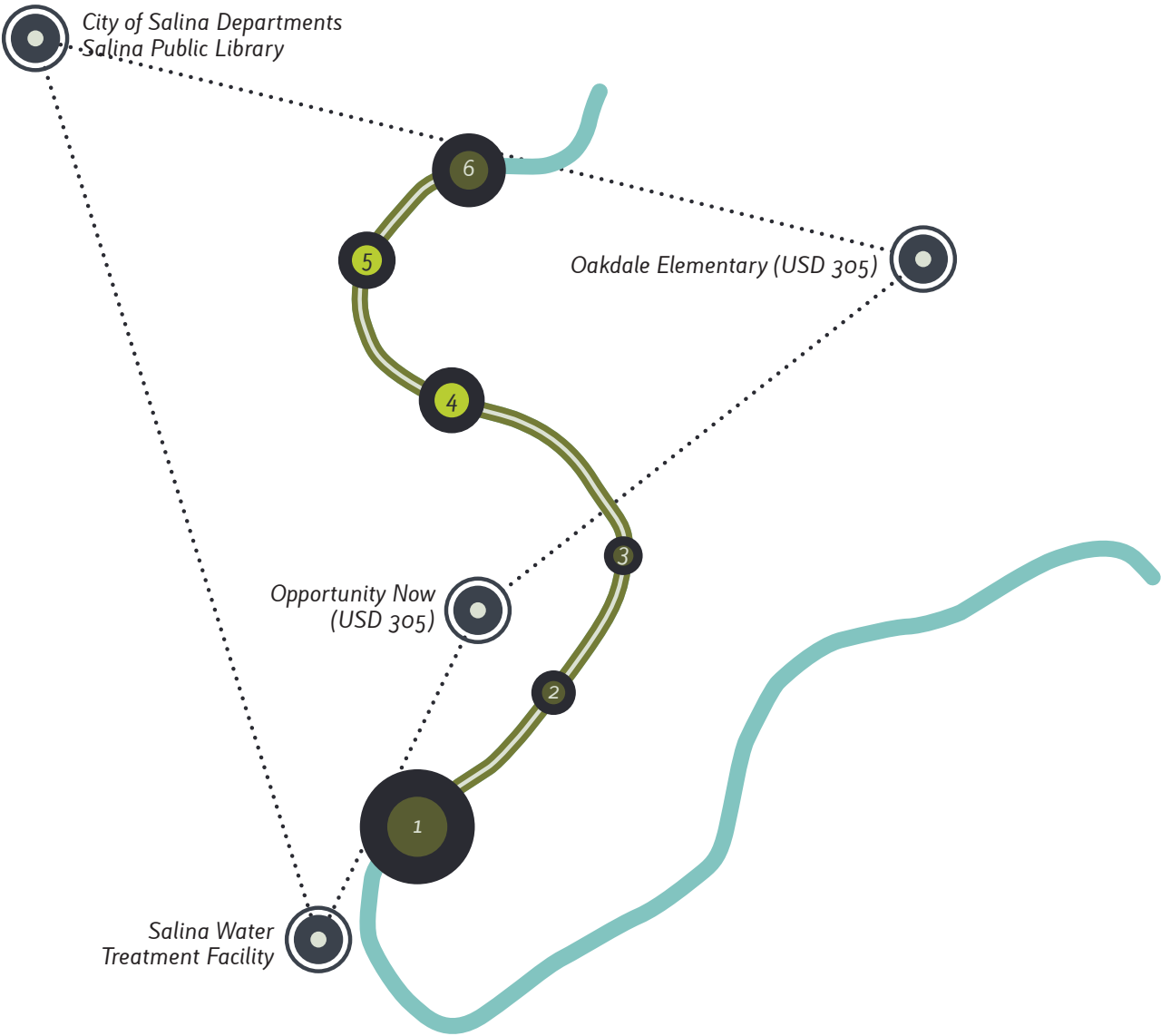


figure 5.03. natural sciences + resource management program

	demonstrative raingarden		agency headquarters	program identification
	wetland detention + treatment train BMP		collaboration link	
	natural sciences + resource management education trail		central reach	
				1. South Street Node Wetland
				2. Mulberry Street Treatment Train
				3. Front Street Treatment Train
				4. 3rd Street Esplanade Plaza Raingardens
				5. Iron Avenue Node Raingardens
				6. Old Mill Node Wetland

catalyzing adjacencies

heritage + historical education

The area around Salina’s Old Mill Dam was once the location of a functioning ferry which transported Salinians and their goods to and from the east and west banks. Utilizing this key historic site and trailhead locations along the central reach, heritage and historical education can carry from the Smoky Hill Museum and its annex at the Old Mill Node to the river southwards. Historical facts concerning the Smoky Hill’s role in the founding of Salina, the use of the river from past to present, the effects of Salina’s flood control measures on the historic channel, and wayfinding to nearby historic sites engage the user at the river pathway entries and trailheads.



figure 5.04. heritage + historical education agencies

potential trailhead historical content

1. Kenwood Park Trailhead – The Founding of Salina, Part I
2. Oakdale Park Trailheads – The Founding of Salina, Parts II, III, and IV
3. South Street Trailhead – River and Industry: Harnessing the Smoky Hill
4. Mulberry Street Trailhead – Crossing the Channel: Bridges and Ferries
5. Walnut Street Trailhead – The Historic Smoky Hill: Flood Control Effects
6. Iron Street Trailhead – Embracing the River: Salinians and Friends of the River

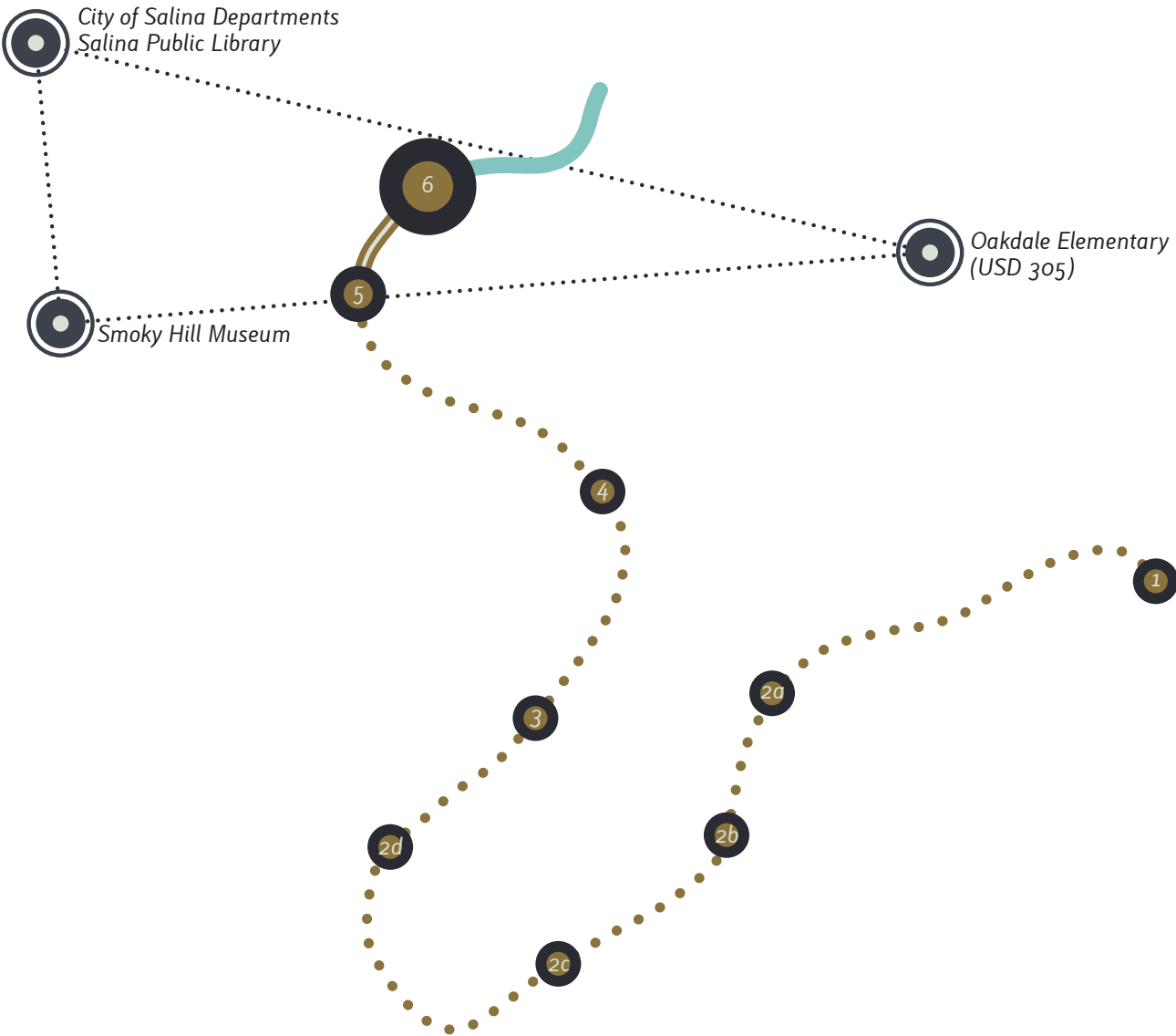


figure 5.05. heritage + historical education program

	heritage + historical education program element		agency headquarters	program identification
	Founder's Park Historical River Walk		collaboration link	1. Kenwood Park Trailhead
	cultural education extension along river trail		central reach	2. Oakdale Park Trailheads
				3. South Street Trailhead
				4. Mulberry Street Trailhead
				5. Walnut Street Trailhead
				6. Iron Street Trailhead

catalyzing adjacencies

passive recreation + socio-economic interaction

Centralized around the 3rd Street Esplanade, the programming at this location acts to anchor the social and commercial interactions existing in downtown Salina along Santa Fe Avenue to the central reach. This connection is facilitated by key social gathering spaces, the Iron Avenue Bridge Overlook and the Walnut Street Community Center, north and south of the Esplanade, respectively. Boating, walking, birdwatching, and other passive recreational uses extend north of the Old Mill Dam Overlook and south of the Walnut Street Community Center, laying the foundation for incorporation with future river reach improvements.



figure 5.06. passive recreation + socio-economic agencies

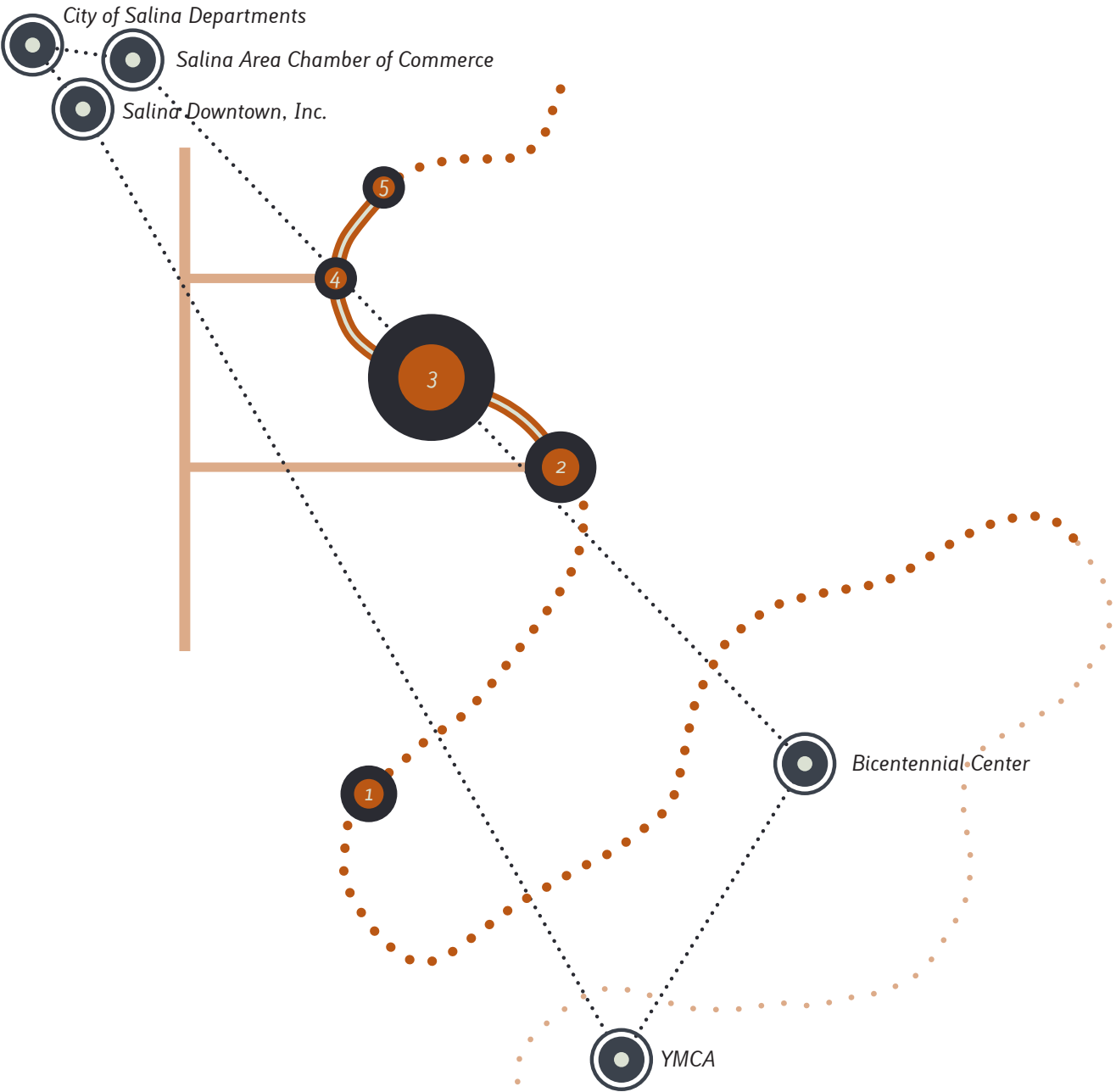


figure 5.07. passive recreation + socio-economic interaction program

passive recreation and socio-economic interaction program

3rd Street Esplanade + Founder's Park Historical River Walk

passive recreation extension

agency headquarters

collaboration link

future water and trail recreation connection

river-downtown socio-economic connection

central reach

program identification

1. South Street Boat Launch

2. Walnut Street Community Center

3. 3rd Street Esplanade Plaza

4. Iron Avenue Bridge Overlook

5. Old Mill Dam Crossing + Overlook

94

95

catalyzing adjacencies

active recreation + health and wellness

The combination of the new Health and Wellness Facility at the Walnut Street Node, the Salina Regional Health Center (SRHC) Outdoor Fitness Area at the South Street Node, and the running +biking trails and trailheads along the central reach create links between significant health and wellness agencies in Salina and nearby neighborhoods. The linear river exercise trail, when combined with the existing street system, offer a myriad of exercise circuits with convenient trailhead access. Future extension of the trail network to the YMCA complex along the south reach will further strengthen this connectivity.



figure 5.08. active recreation + health and wellness agencies

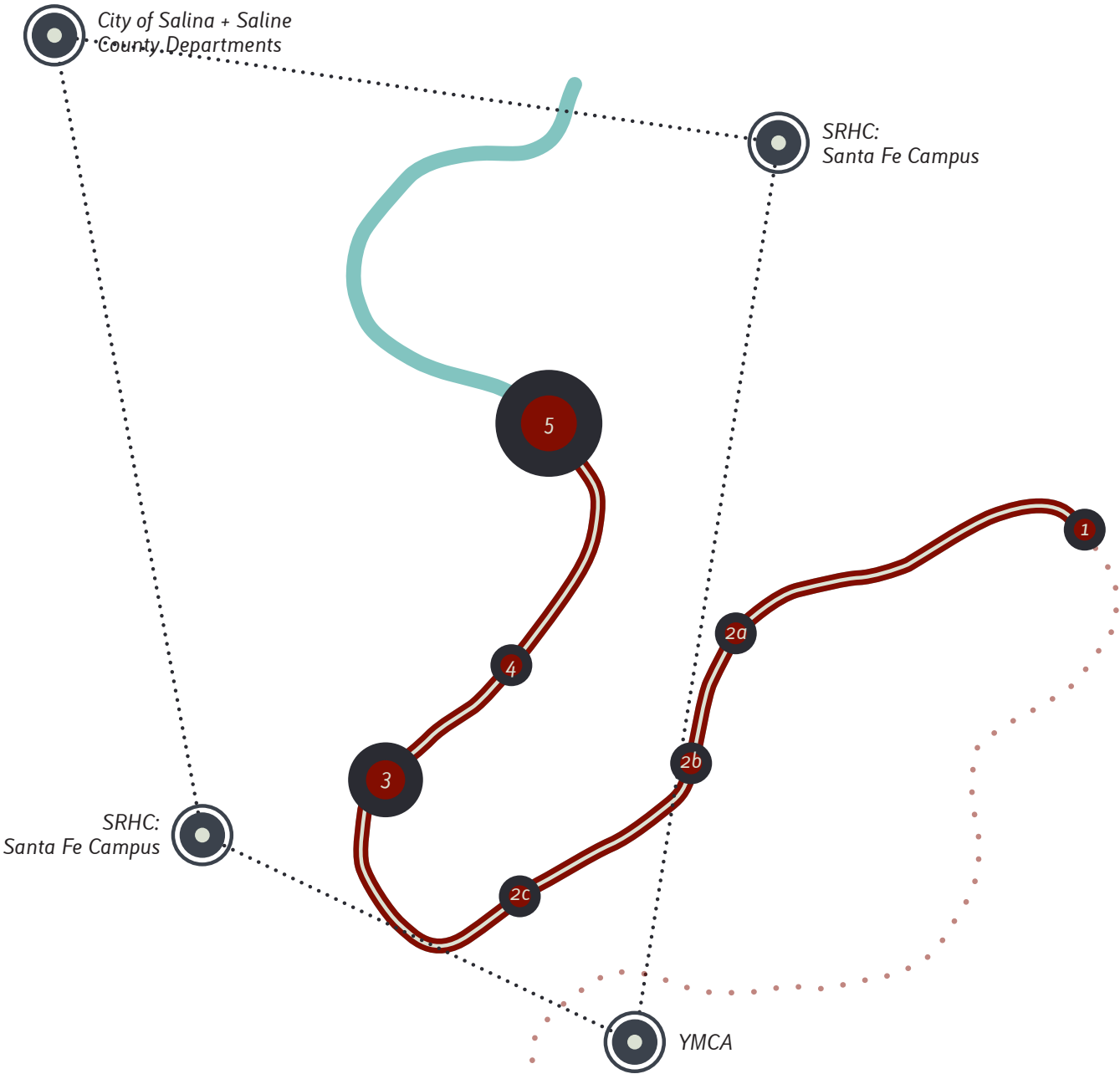


figure 5.09. active recreation + health and wellness program

	active recreation + health and wellness program element		agency headquarters	program identification
	running + biking fitness trail		collaboration link	
	future trail extension		central reach	

1. Kenwood Park Trailhead
2. Oakdale Park Trailheads
3. SRHC Outdoor Fitness Area
4. Mulberry Street Trailhead
5. Walnut Street Node Health and Wellness Facility

art exhibition + performance



presenting the possibilities

edge treatment + envisioning character

The central reach conceptual densities diagrammatic plan, seen in figure 5.12, is suggestive of the proposed edge treatments along the central reach focus area in terms of river edge character, land use, and density. These combined traits create the following edge typologies:

- river edge character (hardscape – softscape – wetland)
- degree of density (high-medium – low)
- building setback from river (narrow – wide)
- land use (commercial-mixed-use – residential)

These typologies create five areas along the central reach with like-program and character edge treatments. These areas, from the southernmost upstream area, are as follows:

1. South Street Wetland
2. Westside Neighborhood
3. Eastside Neighborhood
4. 3rd Street Esplanade
5. Founder’s Park Arts + Heritage District

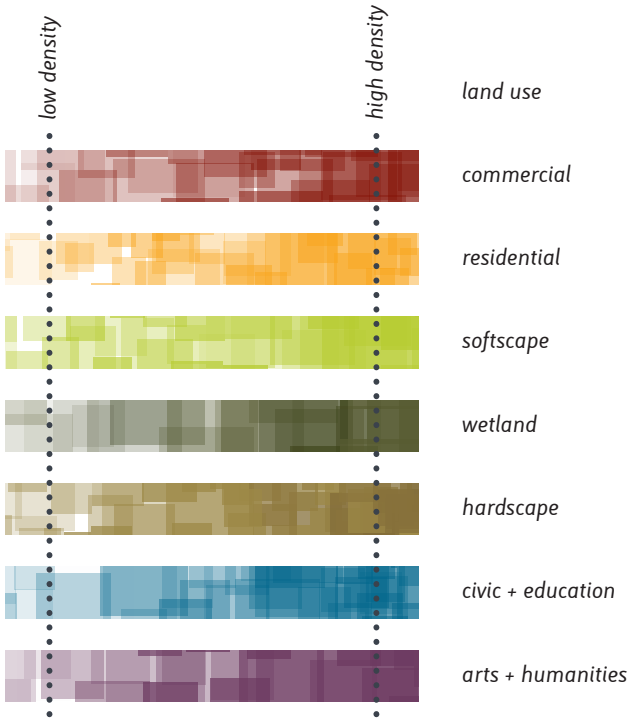


figure 5.12. central reach conceptual densities diagrammatic plan

edge treatment + character

South Street Wetland

The South Street Wetland relates to the South Street Node and Oakdale Park Extension Sub-reach programming.

characteristics

- 1. softscape + wetland
- 2. low-medium density commercial
- 3. riverside park use
- 4. wide river setback

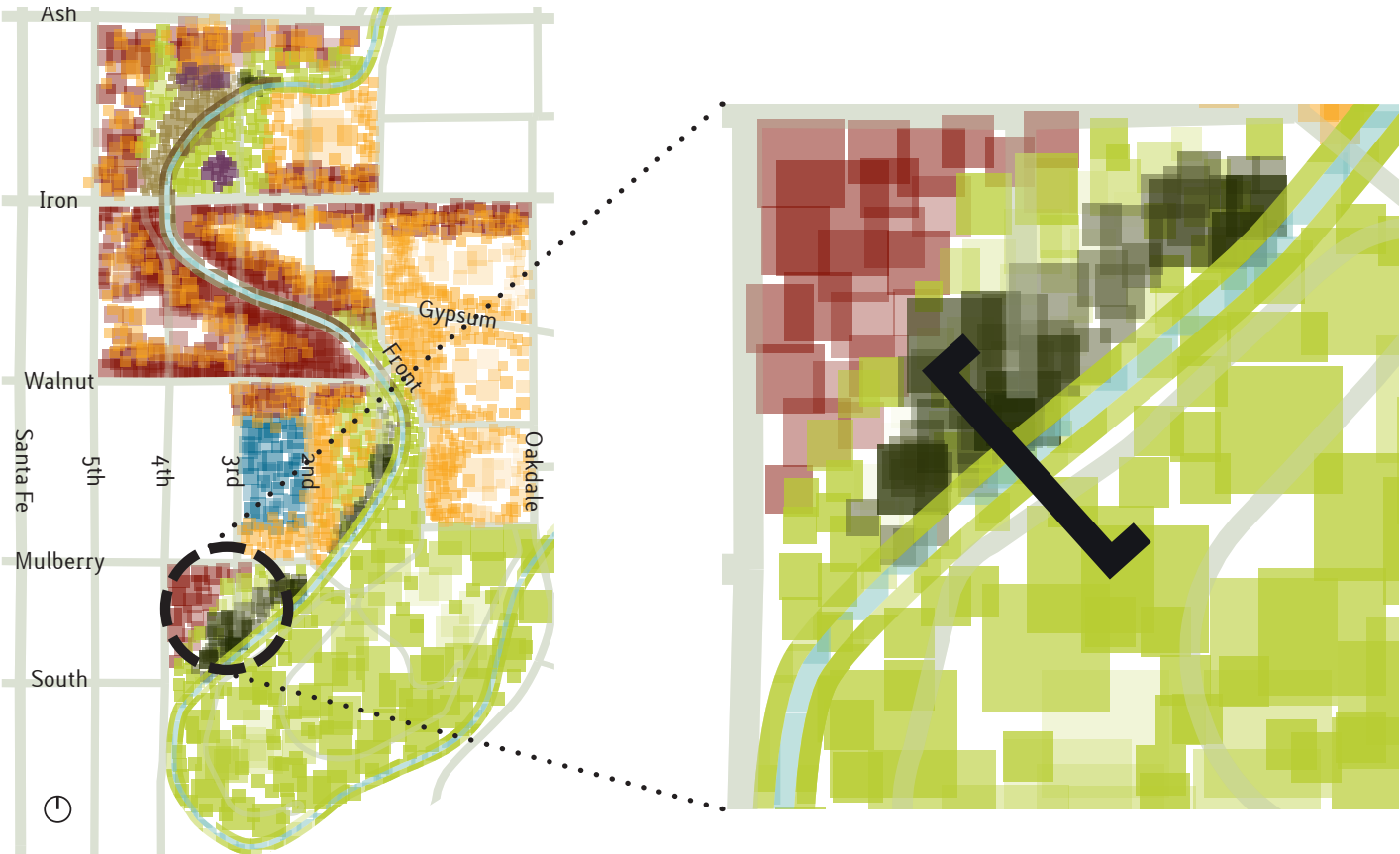


figure 5.14. South Street Wetland conceptual densities plan

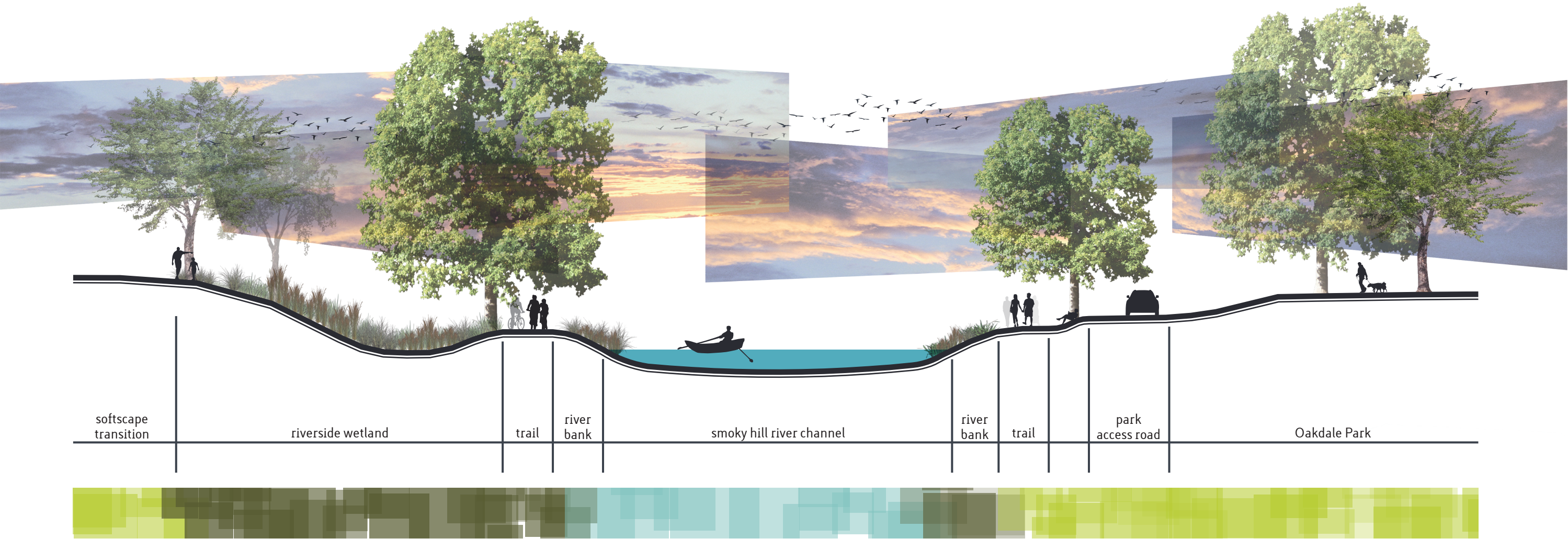


figure 5.13. South Street Wetland typical section

edge treatment + character

Westside Neighborhood

The Westside Neighborhood relates to the Mulberry and Walnut Street Nodes and Front Street Promenade Sub-reaches.

characteristics

- 1. softscape + wetland
- 2. medium-medium high density residential
- 3. medium mixed use commercial
- 4. riverside park use
- 5. education + park use
- 6. wide river setback

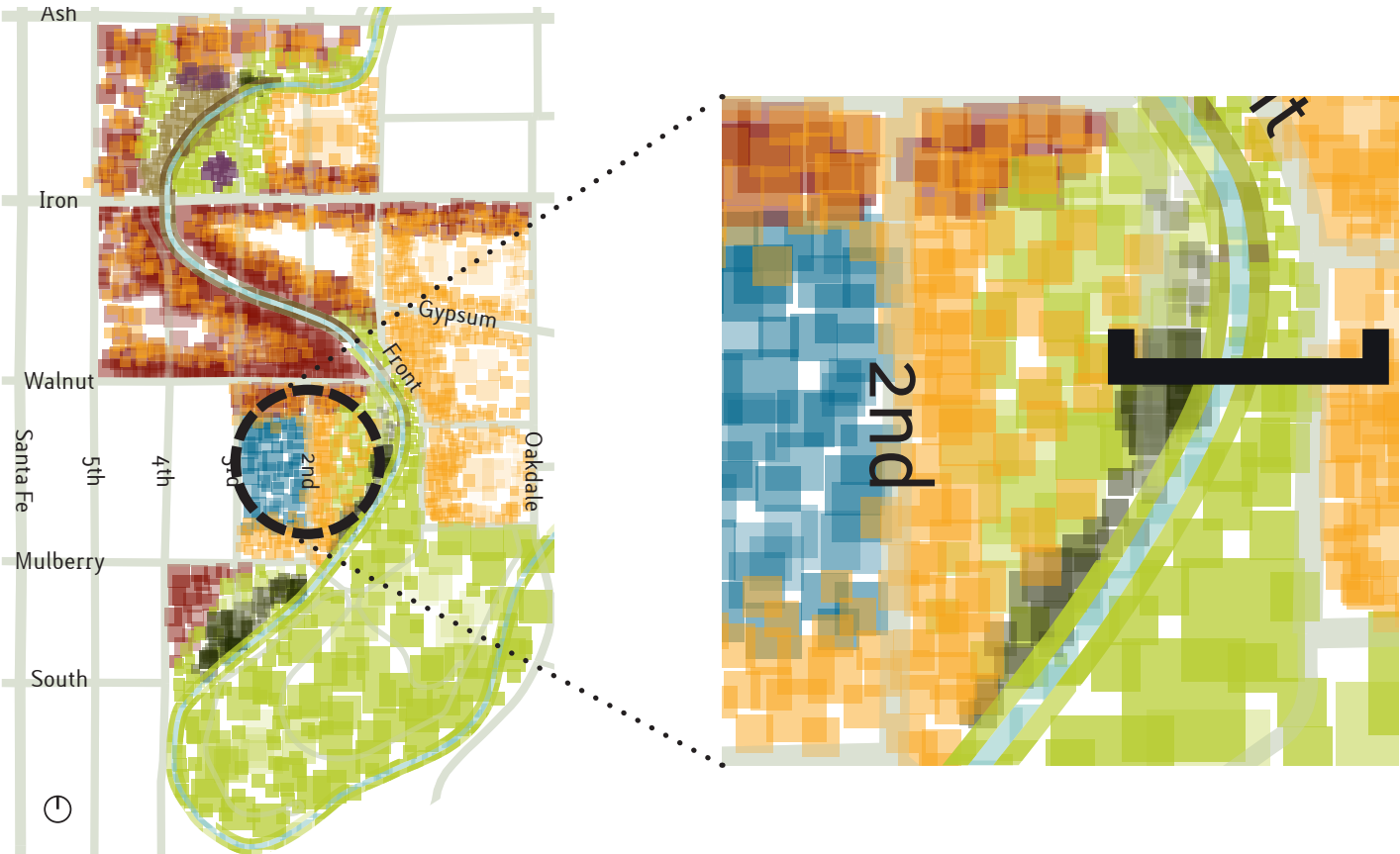


figure 5.16. Westside Neighborhood conceptual densities plan

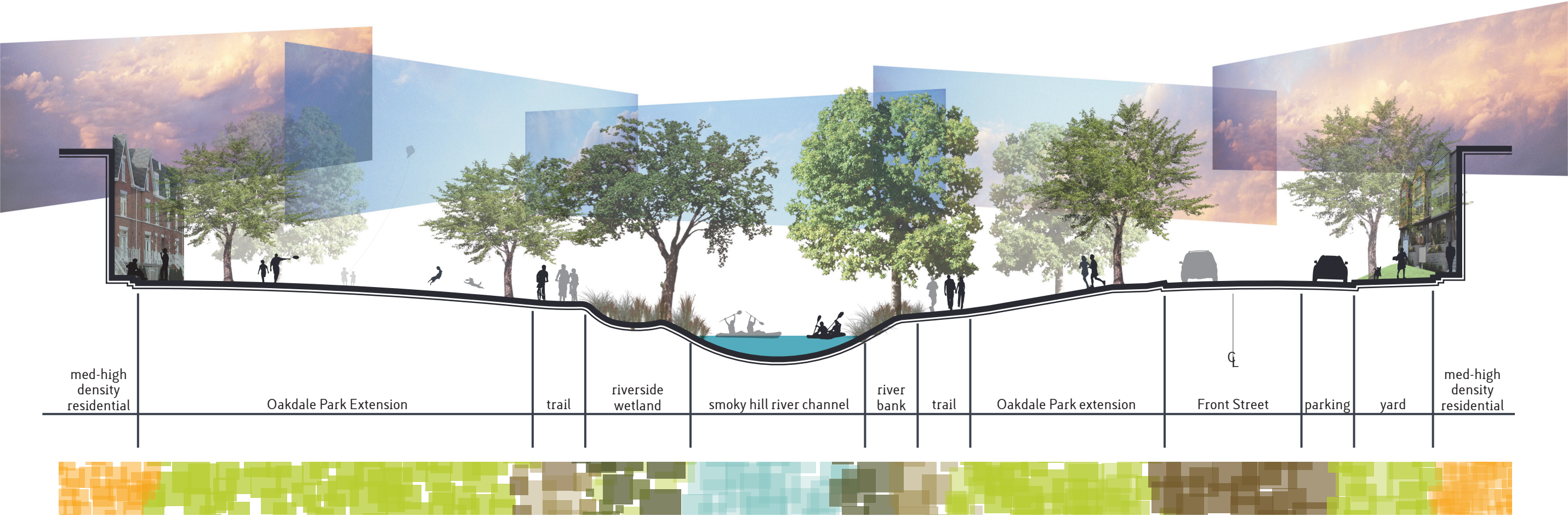


figure 5.15. Westside Neighborhood typical section

edge treatment + character

Eastside Neighborhood

The Eastside Neighborhood, like its Westside counterpart, relates to the Mulberry and Walnut Street Nodes and Front Street Promenade Sub-reaches.

characteristics

1. softscape
2. medium density mixed use commercial
3. medium low-medium density residential
4. riverside park use
5. wide river setback

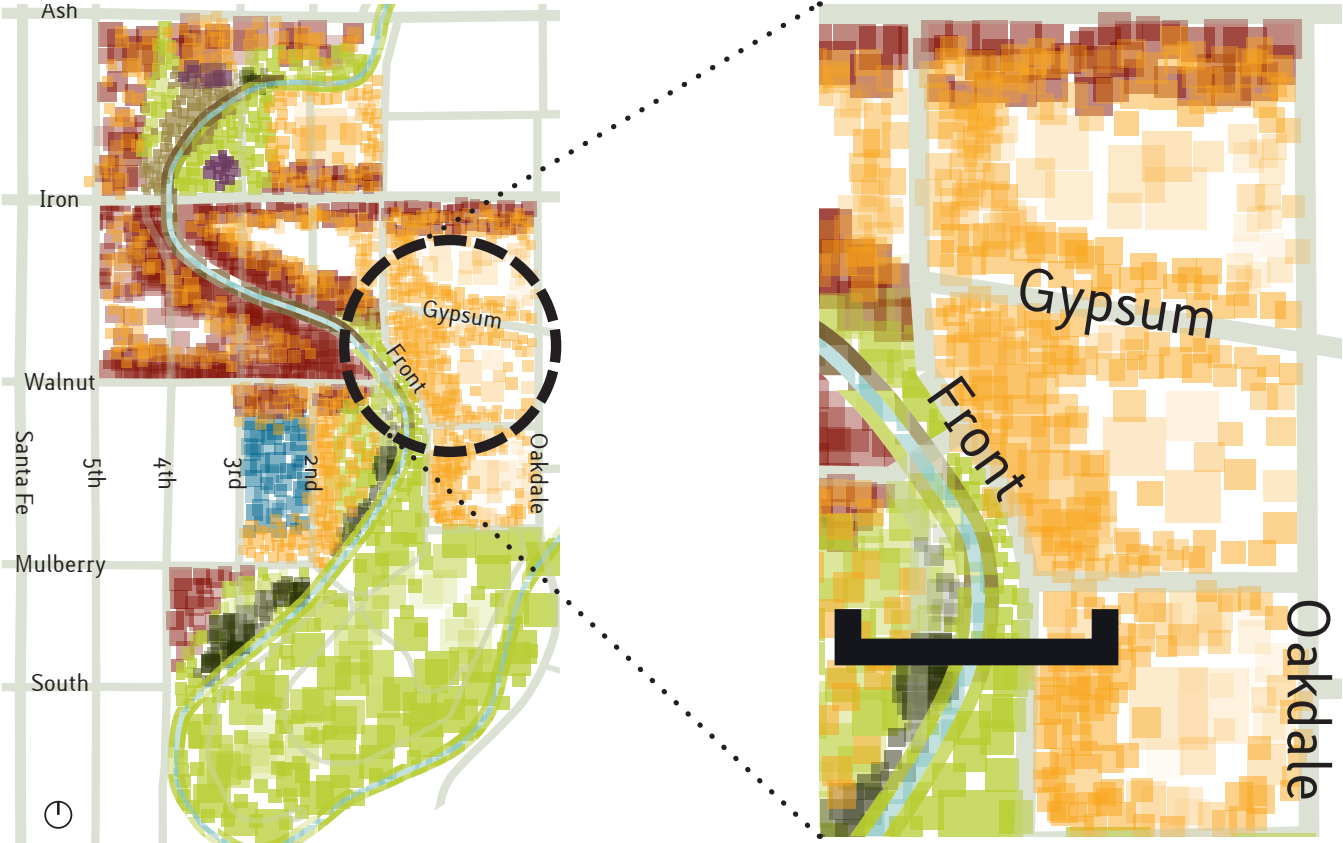


figure 5.18. Eastside Neighborhood conceptual densities plan

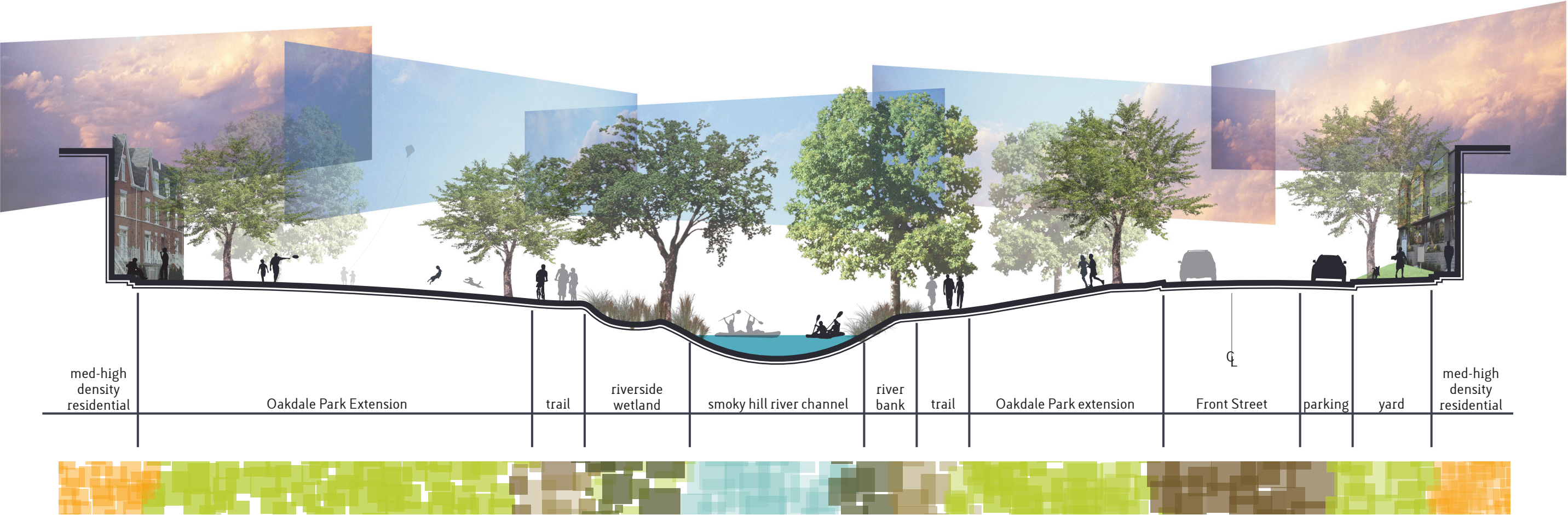


figure 5.17. Eastside Neighborhood typical section

edge treatment + character

3rd Street Esplanade

The 3rd Street Esplanade relates to its corresponding nodes and sub-reaches of the same name.

characteristics

- 1. hardscape
- 2. medium-high density mixed use commercial
- 3. high density residential
- 4. narrow river setback

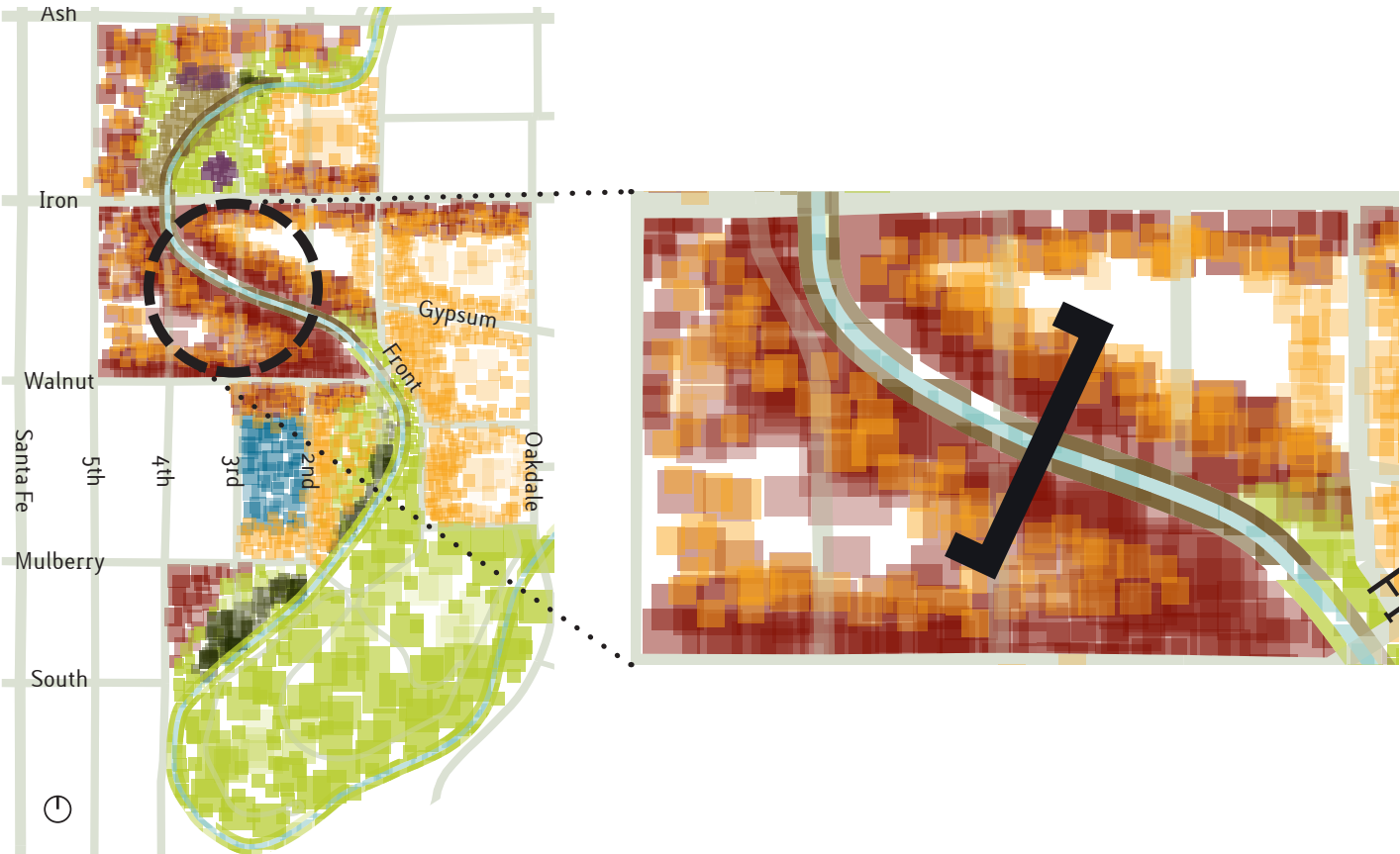


figure 5.20. 3rd Street Esplanade conceptual densities plan

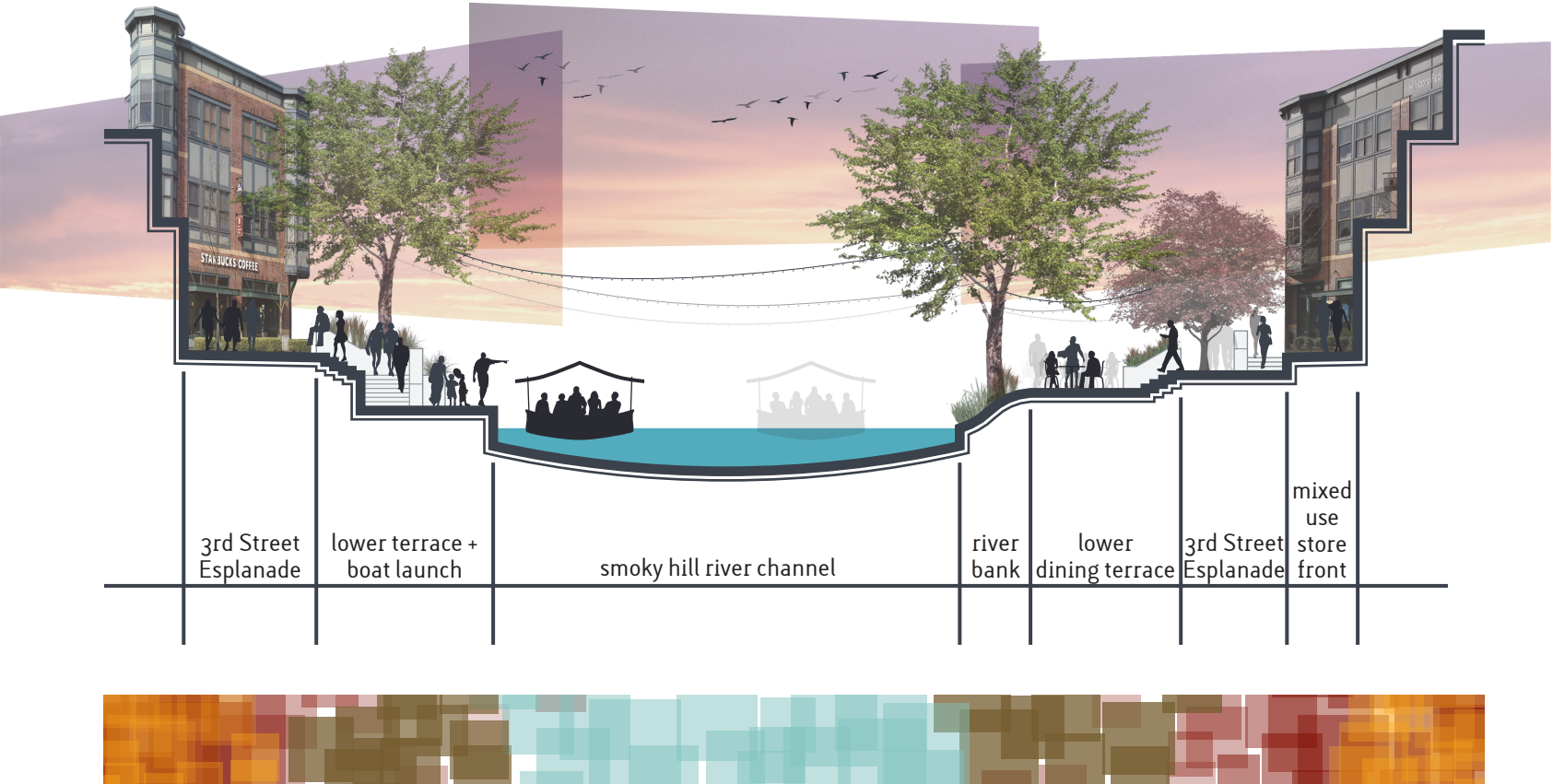


figure 5.19. 3rd Street Esplanade typical section

edge treatment + character

Founder's Park Arts + Heritage District

The Founder's Park Arts + Heritage District relates to the Old Mill and Iron Avenue Bridge Nodes and the sub-reach of which it shares its name.

- characteristics
- 1. hardscape + softscape + wetland
 - 2. medium density mixed use commercial
 - 3. riverside park use
 - 4. arts + humanities use
 - 5. wide river setback

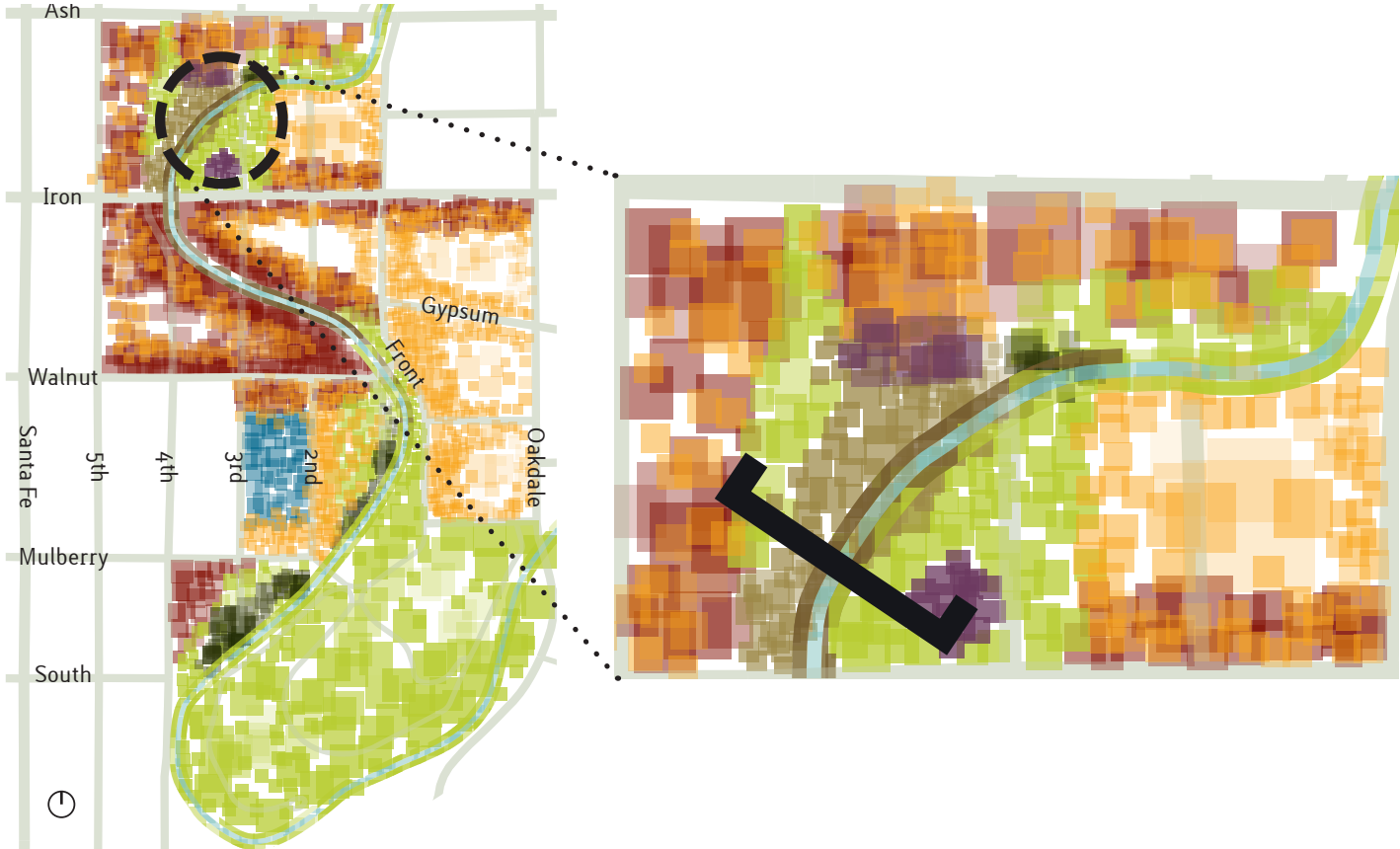


figure 5.22. Founder's Park Arts + Heritage District conceptual densities plan

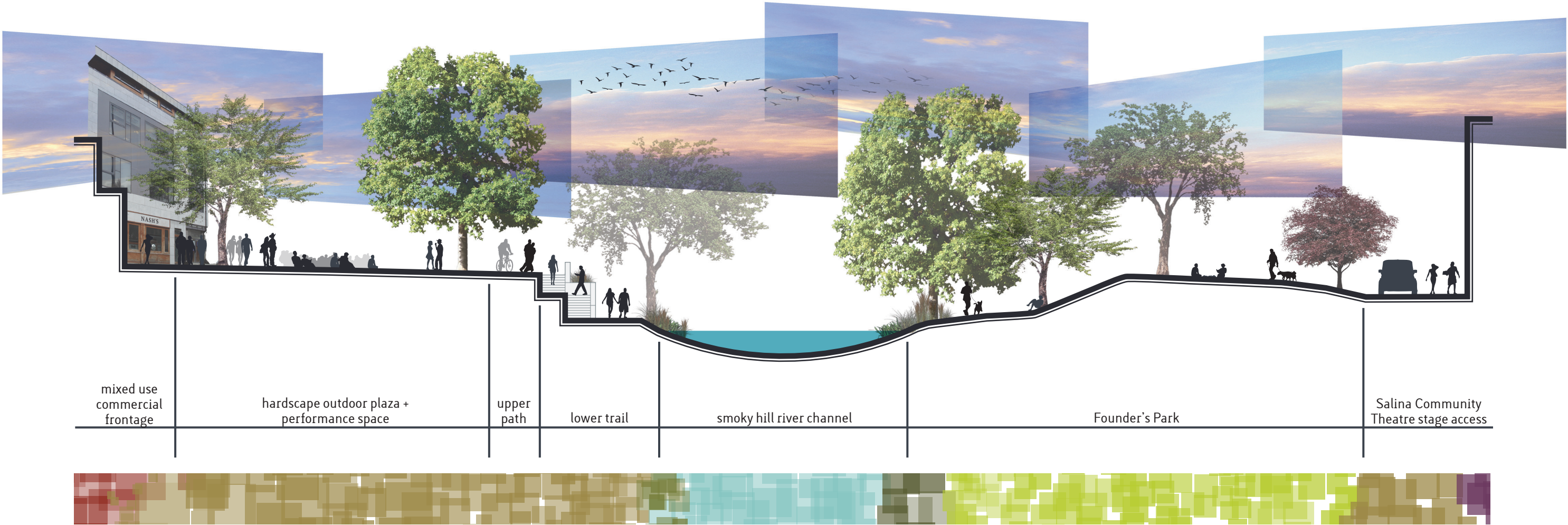


figure 5.21. Founder's Park Arts + Humanities District typical section

strategizing implementation

exploring potential civic tactics for the Founder's Park Arts + Heritage District

Application of the four strategies outlined at the beginning of this chapter not only applies to the site design; rather, it carries through to site selection and implementation. Selecting the Founder's Park Arts + Heritage District as an example, this portion of the design resolution explores the considerations the City of Salina should observe and the suggestions of regulatory tools to accomplish development goals. The outline for this process tree is as follows:

City of Salina considers...

base resources for new development suggestions

- the DSW Old River Channel Master Plan Document Set (to be produced late spring 2010)
- the Salina Comprehensive Plan
- this Master's Report

where to start: site selection

1. benefit/detriment analysis of suggested sites
 - development costs versus expected revenue rate of return
 - advantages/disadvantages for community
 - project feasibility estimation
 - environmental impacts of development
 - long-term effects of development
 - project flexibility + adaptability to socio-economic changes
2. site selection process considerations
 - available land parcels + ownership disposition
 - adjacent land use + zoning

- urban surface physical, social, and landscape infrastructure connections and flows
- construction impacts on surrounding area
- potential consultants' expertise
- public opinion + outreach

preparing to break ground: development implementation

3. preparation
 - necessary land use + zoning + comprehensive plan revisions to enable development
 - funding acquisition
 - consultant contracting + agreements
4. tools
 - i. regulatory powers
 - infill overlay + other zoning districts
 - land assembly + eminent domain
 - right of way + easement acquisition
 - ii. incentives for enticing development
 - density bonuses
 - expedited review processes
 - fast-track permitting
 - property tax abatement
 - infrastructure-related incentives
 - iii. project funding
 - tax increment financing district creation
 - other city-wide tax programs
 - public private partnerships with large land owners
 - state and federal natural system restoration grants
 - private donors



figure 5.23. Founder's Park Arts + Heritage District

strategizing implementation

site selection rationale

The selection of the Founder’s Park Arts + Heritage District as a pilot project for the river restoration effort is backed by several factors. From the analysis of the social urban surfaces, it is a prime area for locating cultural features such as an arts-oriented district and an annex of the Smoky Hill Museum. Significant landscape infrastructural features in the form of two major outflows offer stormwater BMP opportunities. The district’s physical location along Iron Avenue and the river acts as a link between downtown Salina to the west, neighborhoods to the east, and river trails and walks north and south, setting up significant vehicular and pedestrian gateways (figure 5.28). Furthermore, the existing land use, existing zoning, and future land use coincides and compliments the proposed programming (figures 5.24-5.26), while its

location along the central reach reflects Salinians’ preference for development location. Finally, land ownership adjacent to Founder’s Park offers the largest and most unified parcels when compared to the rest of the central reach (figure 5.27), significantly increasing potential development implementation, as developers are generally more attracted to large, cohesive blocks of land.

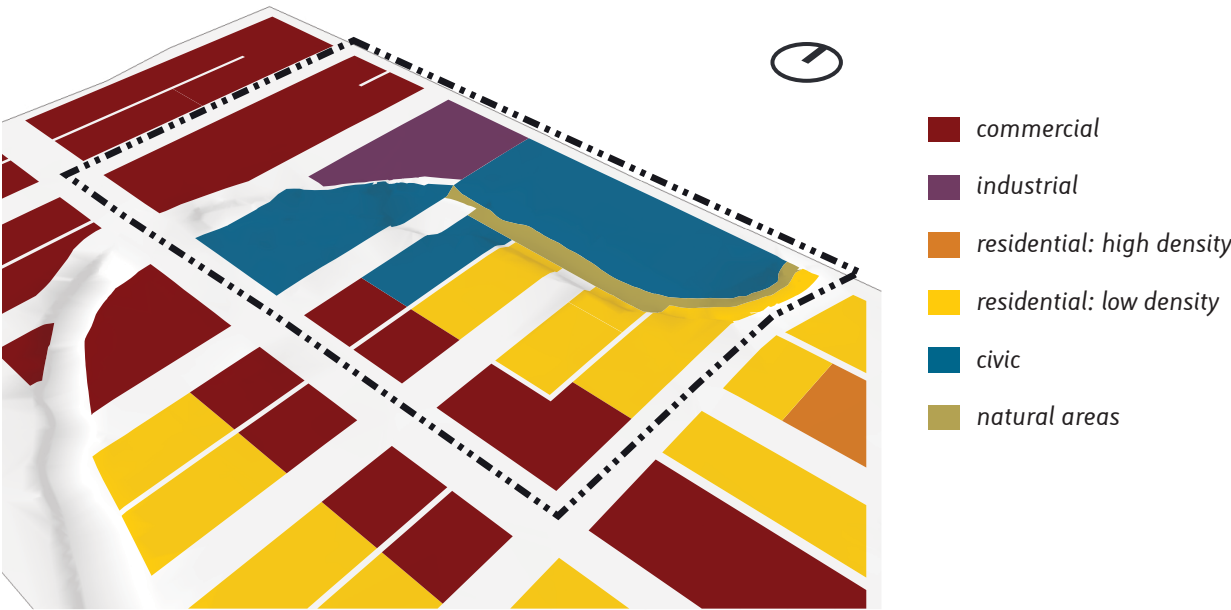


figure 5.24. Founder’s Park Arts + Heritage District existing land use

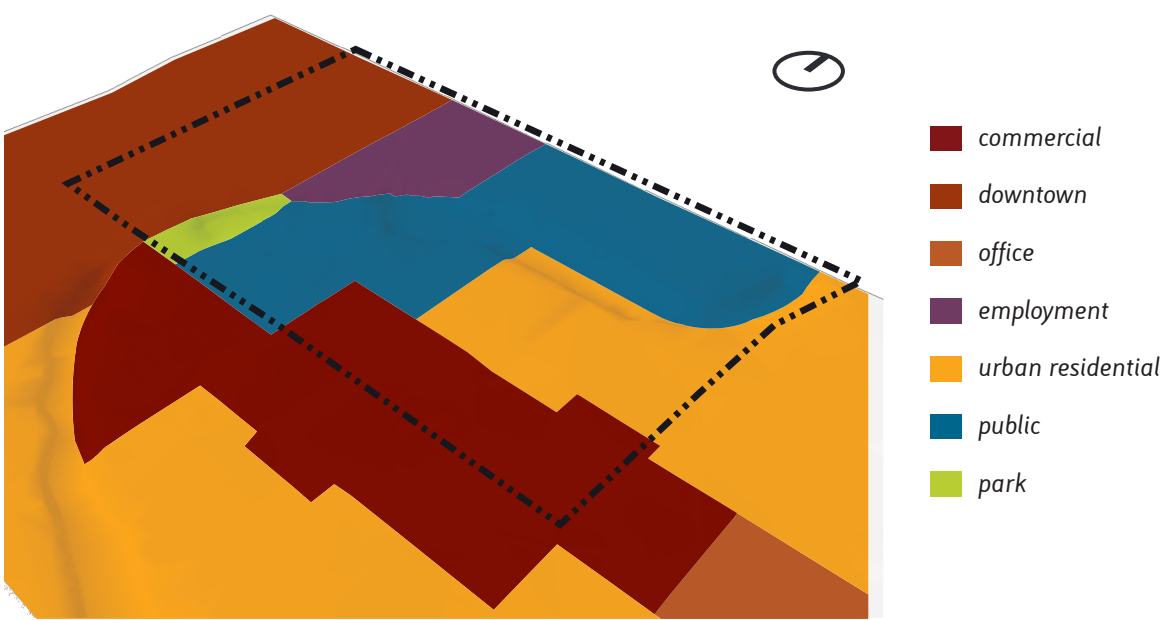


figure 5.25. Founder’s Park Arts + Heritage District future land use

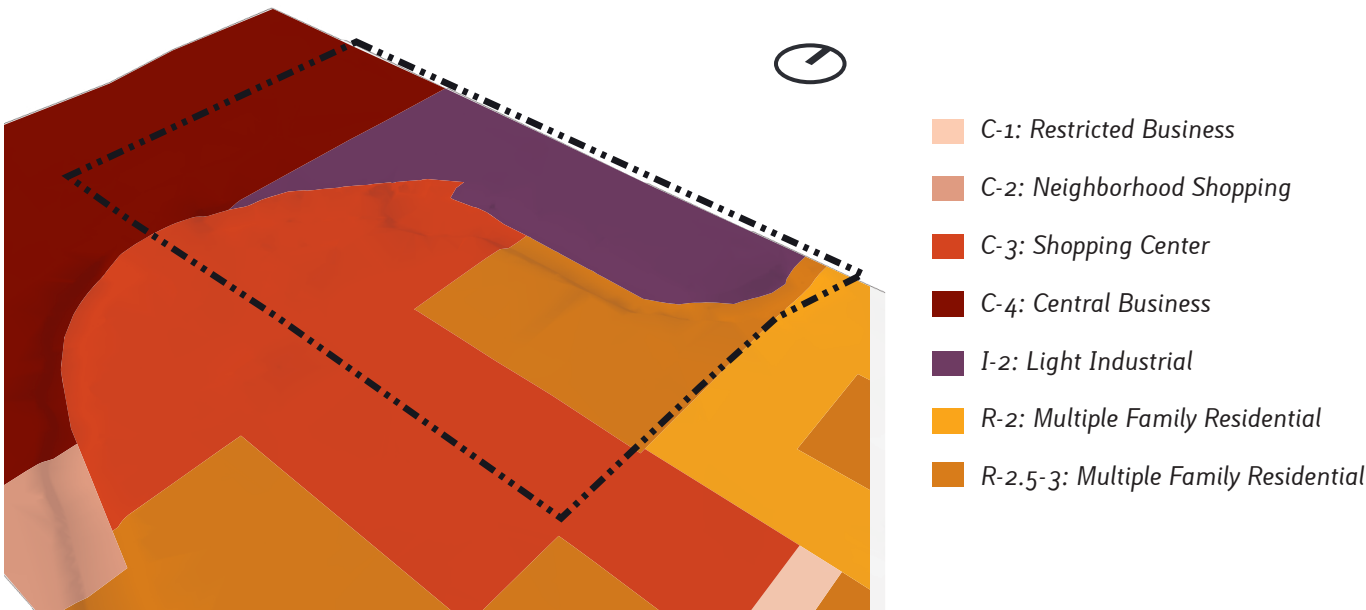


figure 5.26. Founder’s Park Arts + Heritage District existing zoning

strategizing implementation

development scenario of the Founder's Park Arts + Heritage Zone

In the event that the Founder's Park Zone is selected for development, following rigorous benefit/detriment analyses and feasibility studies, development could occur in the following fashion. As a disclaimer, this portion of this master's report is by no means complete or exhaustive in the steps necessary to enact development. The aim, however, is to explore the potentials that the site's urban surfaces hold while suggesting methods for engaging those potentials.

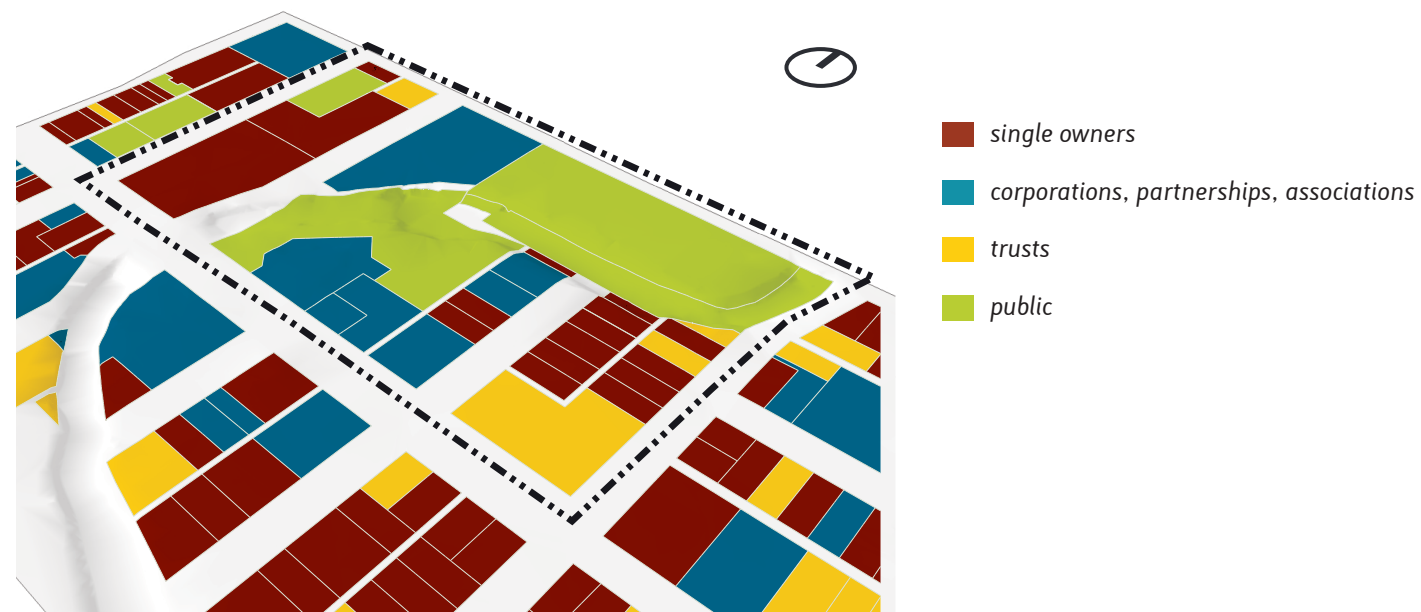


figure 5.27. Founder's Park Arts + Heritage District parcel ownership

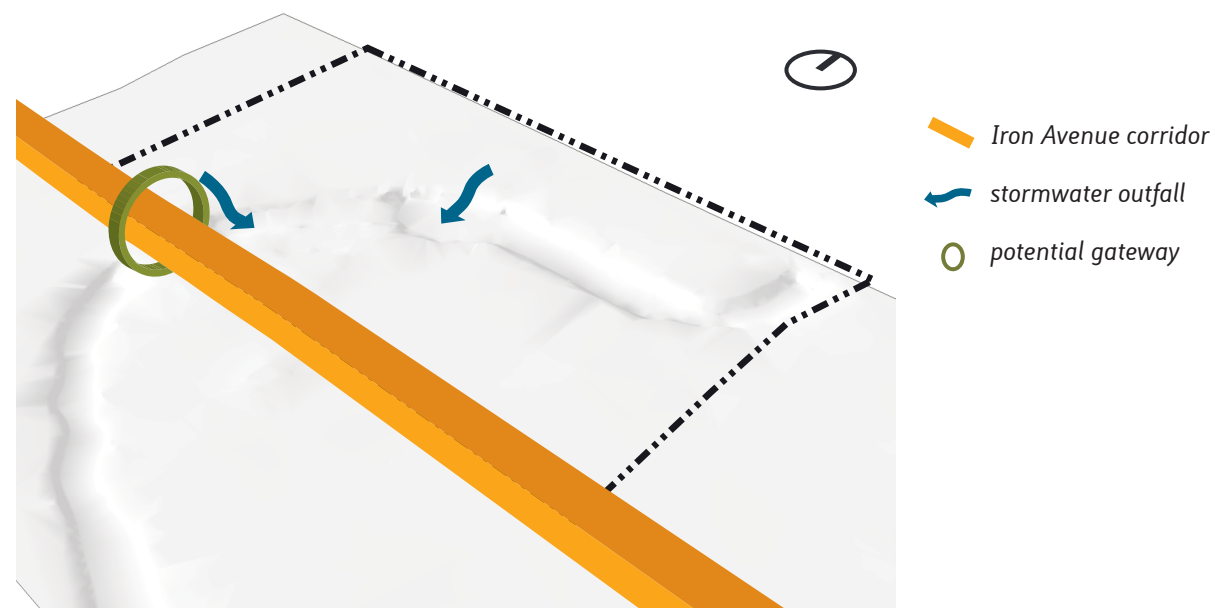


figure 5.28. Founder's Park Arts + Heritage District significant physical and landscape infrastructural urban surfaces

strategizing implementation

provision for change

Changes to the existing zoning and existing/ future land use will initially be required to allow degrees of flexibility in development options, as well as providing incentives for infill development. First, the existing industrial and civic zoning and land use must be altered to allow for a mix of uses beyond the narrow scope they currently entail, seen in figure 5.29. Second, to encourage interest in redevelopment within the Founder’s Park District, an infill overlay zoning district, coupled with density bonuses to achieve the desired concentration of uses, will be implemented (figure 5.30). These two regulatory alterations provide the attraction and means to begin development.

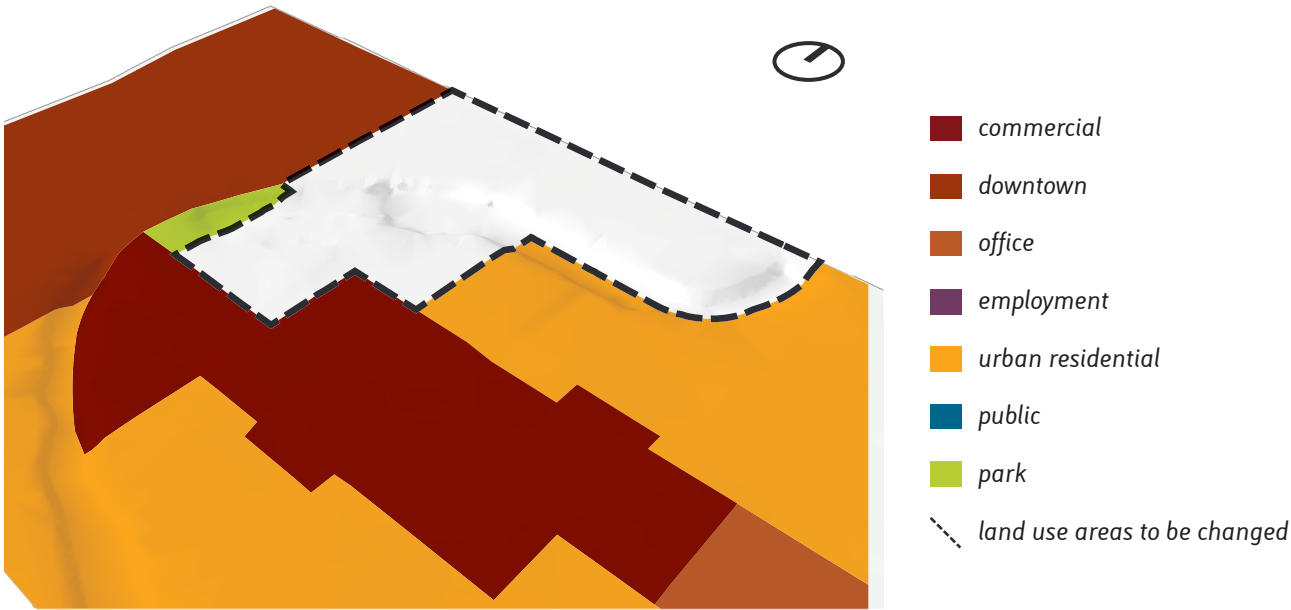


figure 5.29. Founder’s Park Arts + Heritage District land use alterations

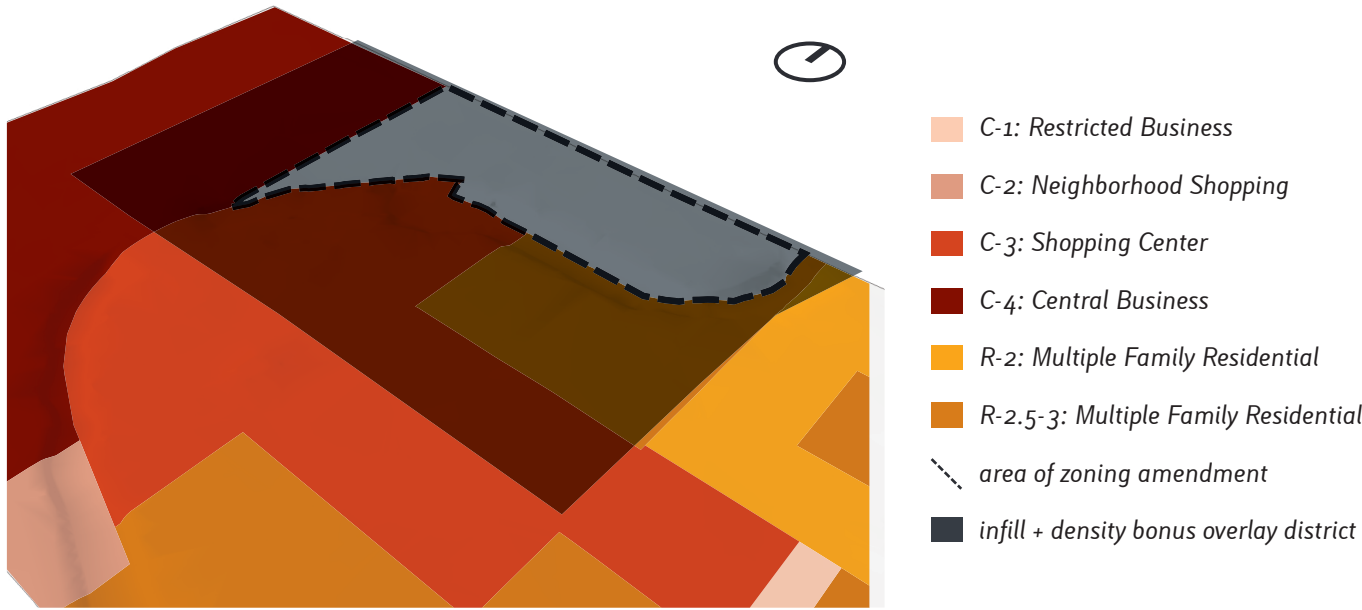


figure 5.30. Founder’s Park Arts + Heritage District zoning amendments + overlay districts

strategizing implementation

initiating the catalyst

As stated, the land in the Founder’s Park Arts + Heritage District is characterized by the existence of large parcels consisting of a singular owner, specifically those owned by the City of Salina. The parcels immediately adjacent to the Founder’s Park sub-reach consist of three owners: one private owner, the Western Star Mill Company, and the City of Salina. Two additional land owners, the Salina Community Theatre and a private land trust owner, are prevalent outside the river’s immediate adjacency. These entities, as well as the entities identified as being key players for facilitating the heritage and arts programmatic elements, could also potentially act as collaborators in the partnership. Beginning with the highlighted area seen in figure 5.31, the City could approach the two land owners with the prospect of forming a Public-Private Partnership (PPP) for development.

The City could then establish a tax increment financing (TIF) district over these specific parcels to invest in the necessary river improvements and site preparation (figure 5.32). These improvements could include the construction of the Iron Street Bridge, applicable infrastructural alterations to the Old Mill Dam, and riverside edge treatments in the form of trails, bank stabilization, and vegetation clearing/planting, and the clearing of decaying infrastructure. In turn, the City could request of the PPP the construction of the programmed public spaces within this district, as well as necessary provisions for public space amenities and the Founder’s Park sub-reach stormwater BMP, to provide the base catalyst for the district

to grow. Doing so would utilize the strategy seen in the Central Platte Valley precedent through the construction of Commons Park in the first phase of development.

Secondly, the City could pursue a similar rail-banking strategy for the railroad tracks running north and south on the west side of the river, as was utilized in the High Line precedent. This would alleviate train-pedestrian conflicts, creating both a more cohesive space and another facet of pedestrian linkage. This effort may also yield state or federal funding through EPA grants for brownfield site remediation in conjunction with the Western Star Mill site, increasing budget feasibility of the district redevelopment.

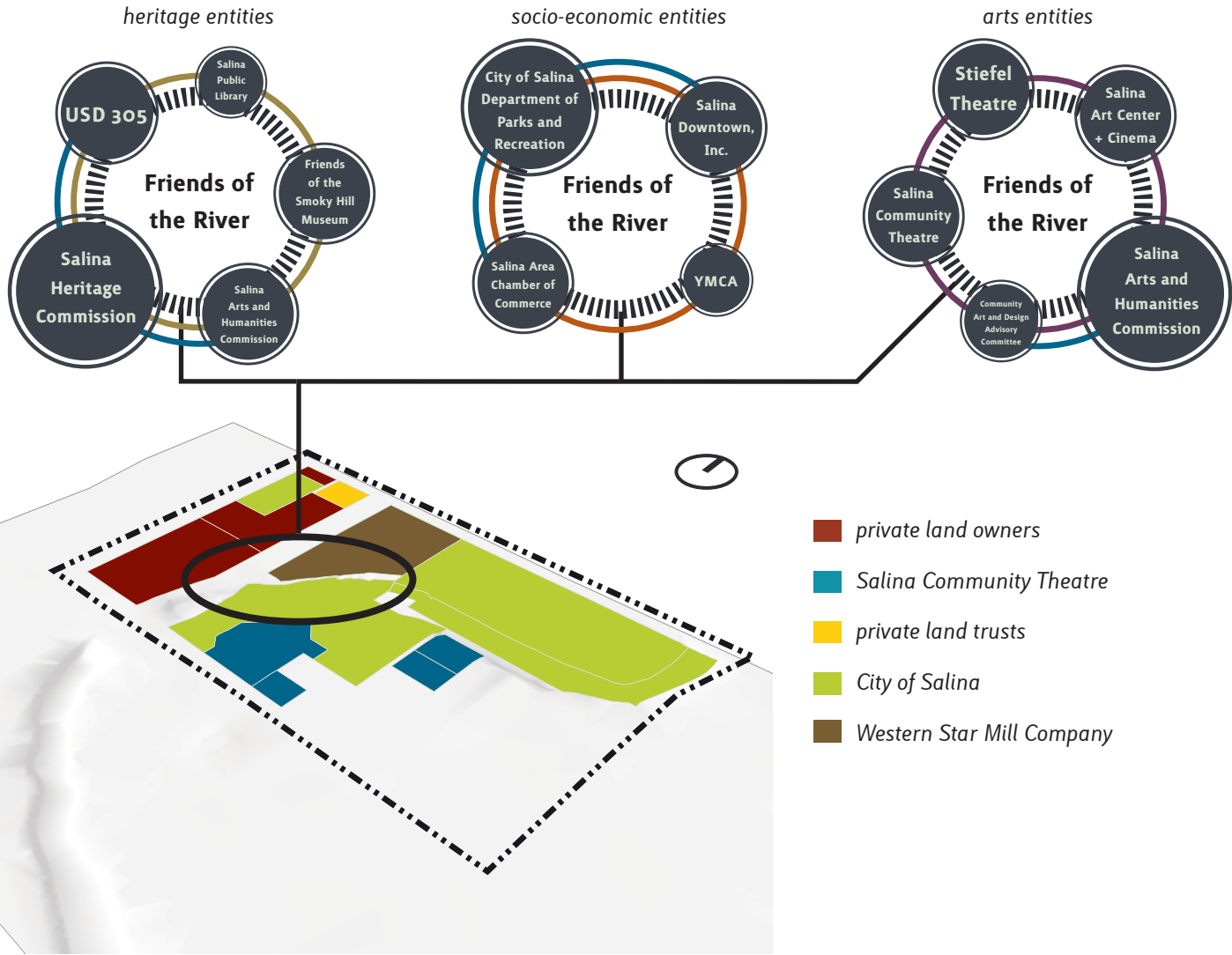


figure 5.31. Founder’s Park Arts + Heritage District public-private partnership entities

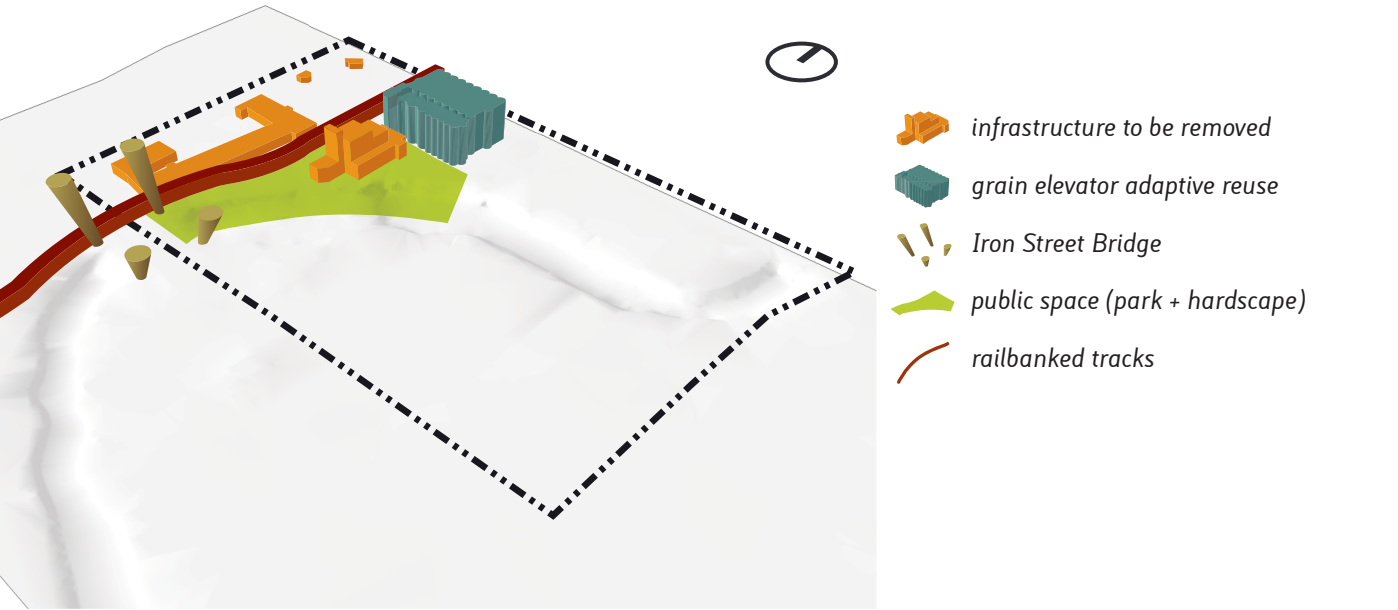


figure 5.32. Founder’s Park Arts + Heritage District altered infrastructure

strategizing implementation

catalytic effects

The success of the initial development immediately adjacent to the Founder’s Park sub-reach would soon spread to nearby parcels, nodes, and sub-reaches. Continued improvements in the form of trail extensions, public art gateways, and the Old Mill Dam stormwater BMP would make the district more attractive and accessible to visitors and residents alike. This increased connectivity north

and south along the river and east and west along Iron Avenue would stimulate further desire for redevelopment of those parcels. Additionally, the success of this project would back the Friends of the River’s overall goal of holistic renewal of the Historic Smoky Hill River, garnering the support of Salinians on future renewal and redevelopment efforts.

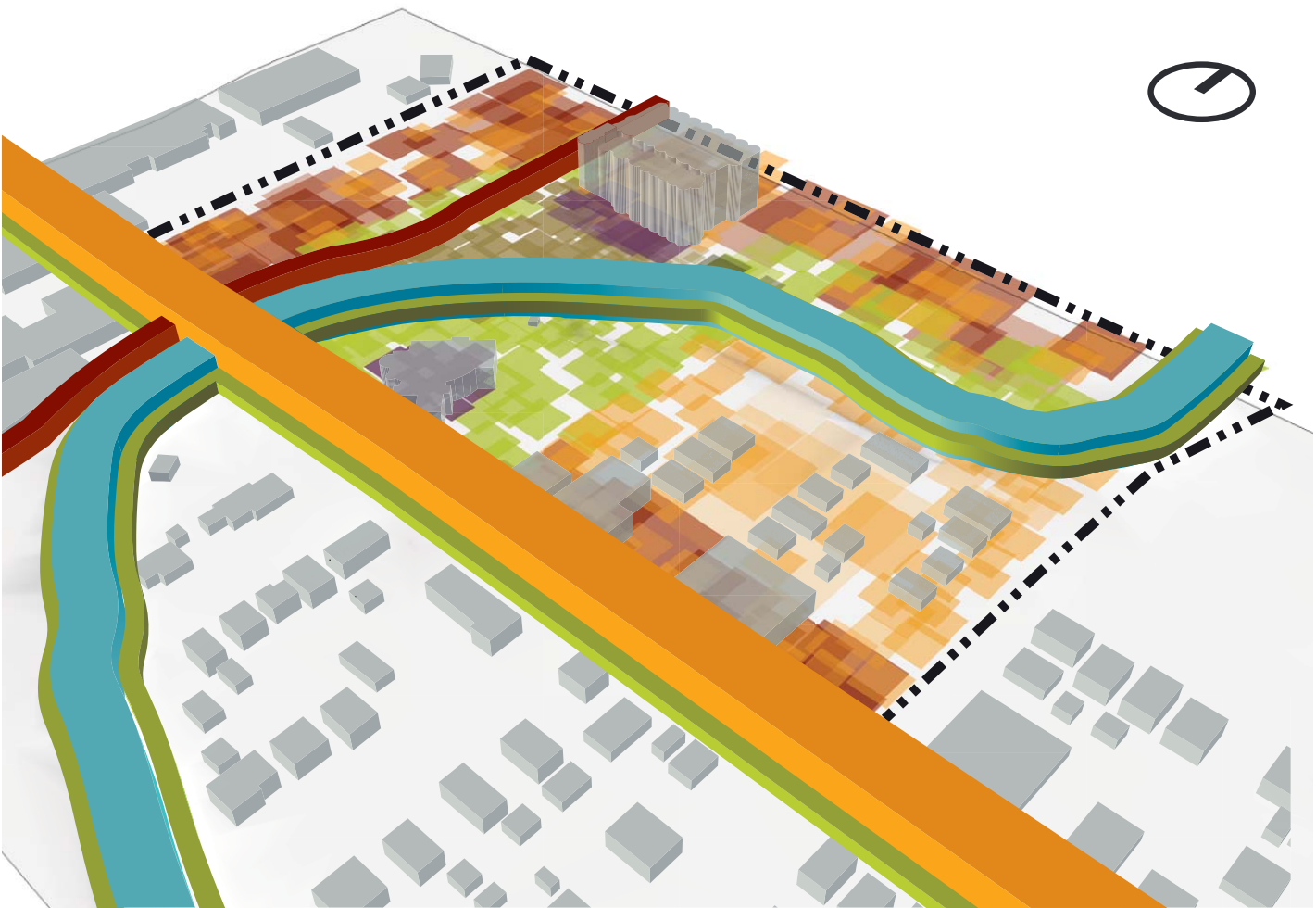


figure 5.33. Founder’s Park Arts + Heritage District: catalyzed connections + conceptual densities

chapter 6: evaluating the catalyst

“...theory can have a more critical role, which resists and challenges taken-for-granted ways of thinking, and puts forward alternatives...Theoretical work that critiques current knowledge in this way disrupts and destabilizes the discipline, stimulating a search for new forms of knowledge and new ways of working.”

*-Simon Swaffield, Professor of Landscape Architecture
at Lincoln University, New Zealand*

chapter 6: evaluating the catalyst

reflecting on process and theory application



figure 6.01. the Old Mill Dam, revisited

The theoretical realm of landscape architecture “can generalize and codify knowledge, as a basis for practical action”, in addition to providing innovating strands of thought processes evidenced by the quote on the opposing page (Swaffield 2002). Instrumental and critical theory therefore acts to inform practical design responses while being analytical of our methods, considerations, and reasoning for those responses. Theory, like many other professions outside design, is a useful tool for understanding pragmatic and idealistic modes of practice.

encountered challenges

Difficulties often arise, however, in the adaptation of critical theory to practical use. In the case of my experiences with landscape urbanism and this master’s report, this could not be truer. Correlating components of an emerging, speculative, and intellectual design theory across a range of text,

ideas, and schools of thought is challenging in itself. Adapting a process for analysis and application, though just as difficult, became as crucial to this effort as addressing this master project’s dilemmas.

Concerning landscape urbanism, two crucial elements, flexibility and temporality, provide complications. How does one envision an open-ended set of futures for an area of the city? Is a rigid master plan an appropriate method for representing a mere snapshot of time? At what point does the consideration of indeterminacy derail planning and design efforts? Is it possible to implement a specific design that satisfies the temporally flexible condition? The varied “answers” may be as complex as the questions asked.

The consideration of temporality, as well as treading into unknown design territory, offered unique challenges that augmented the scope and end products of this master’s report. Initially, my thought was that the singular illustrative design solution of a specific site would satisfy my intentions of envisioning a catalyst along the Smoky Hill. Throughout the course of work, however, it became clear this notion was counter to the spirit of landscape urbanism, and it became evident that a more appropriate solution entailed the envisioning of many possibilities rather than a single answer. This is the nature of the design response: to exhibit potentials and suggestions for the implementation of those potentials while stating how the complex relationships between Salina and the river can evolve through time.

evaluation of process

Understanding critical theory, how to affect change of thought and process in landscape architecture and its allied fields, requires methodologies that consider that adaptation of the idealistic to the pragmatic. This body of work has illustrated one approach, which by no means is the only correct method, and is not without its faults. A brief evaluation of process then becomes important for future endeavors of adapting theory into design execution.

The overall process consisted of the following phases:

extracting theoretical tenets from a body of literary work;

analyzing precedents based on how those tenets operated within particular case studies to derive strategies;

comparing, between the site inventory and analysis of Salina and the precedents, to find similar conditions for those strategies; and

applying the precedent-derived strategies to Salina's central reach.

My most significant critique of the overall process is that it is very linear in nature, where each phase yields a specific product. This is partly due to the nature of the curriculum, and partly due to time constraints. However, a method that would likely provide a deeper sense of insight and discourse would be to complete one or several of these phases, then loop back to previous phases with those new considerations in mind. This circular thinking method can offer both accumulative and

narrowing results, enriching the level of thought while providing more accurate products from phase to phase. The synthesis could be evaluated and augmented in this manner.

salina and the smoky hill

The design response suggests programmatic uses desired by Salinians (through the Friends of the River, FotR) and densities (as per the dilemmas) to create and better facilitate existing urban flows: be it physical, social, or landscape infrastructural in nature. By no means are these suggestions exhaustive of the historic Smoky Hill's potential for facilitating connections across Salina's multiple urban surfaces. These suggestions, however, act to present possibilities that can adapt and morph over the course of time, dependent on a variety of economic, social, and regulatory factors, over the flexible frameworks.

This report can then become useful for the City of Salina and the FotR to consider how changes along the Smoky Hill can catalyze the river and its adjacent urban zones based off their inherent characteristics. As a palette for development, this report offers not only a starting point for consideration, but also an example of how the remaining reaches of the historic Smoky Hill can be analyzed and catalyzed. Additionally, this report can begin to guide the design considerations of projects within similar urban environments to Salina, creating stronger ties between a location's urban surfaces and the people who live there.

on scale: metropolitan and micropolitan

An initial goal, the exploration of landscape urbanism applicability in micropolitan environs, was at first an item of concern. Design firms

such as Field Operations, stossLU, the Central Office of Architecture (COA), and the Office for Metropolitan Architecture (OMA), have completed projects, design competitions, and charrettes in locations such as Toronto, New York, and Los Angeles that reflected landscape urbanism lines of thinking. Relatively unexplored, however, is landscape urbanism's application to smaller scales of urban environments. Could small cities exhibit the same potentials and yield similar results as their metropolitan counterparts? Are micropolitan places so different that they require different design strategies?

One would say the answer to these questions are debatable. The nature of the urban surface is changing, noted in Alan Berger's Drosscape:

"Scholarship regarding urbanism is shifting toward landscape and away from architecture as many find that rapid horizontal urbanization escapes traditional descriptions of the city as a place of concentrated population, bundled infrastructure, architectural density, and centralized government" (Berger 2006).

With changes in the urban surface becoming less dense and more horizontal, the necessity for connection and interrelation among its parts becomes more crucial. The sprawling phenomena occurs at the edge of most of today's urban environments. The need for connection, then, implies the importance of landscape urbanism theory in places considered "suburban". Therefore, it is reasonable to assume that in cities such as Salina, landscape urbanism is just as applicable as it is in Toronto, New York, or Los Angeles.

The notable difference, as seen in comparing the analysis of the precedents and Salina, is the

thickness of that urban surface available for manipulation. While the densities of development in Denver and New York afford those places more opportunity for connections across their urban fields, Salina's surfaces are relatively less dense. The base reagents, however, still exist in places like Salina, and can therefore be catalyzed in similar ways.

conclusion

"The Achilles' heel of city planning has always been its inability to accurately foresee the needs of future communities...recent observations of area planning projects have revealed that no matter how creative or insightful the initial plan, standard planning generally results in communities lacking strong economic motors – insufficiently adaptable to changing conditions and often possessing only limited urban quality."

-Except, Rotterdam-based design firm, on Growth-Planning Development Theory

As the nature of our built environment changes, so must our toolset for considering and realizing its form and function. While landscape urbanism, scenario planning, growth-planning development, and other similarly-minded schools of thought offer great insight into how we should approach this new landscape we live in, they are far from being complete in terms of their application resolution. Only through continued research, innovation, and experimentation can these tools of design become conventional methods of urban development; however, once established they will no doubt be of powerful benefit to the way our cities function, grow, and evolve.

appendix a

“Those who have achieved all their aims probably set them too low.”

-Herbert Von Karajan

appendix a

project/personal goals + objectives - friends of the river committee goals

project/personal goals + objectives

- further my studies of landscape architecture and urban design, while creating a project that will express my own personal views on pertinent issues in our field
- further my understanding of the design processes on the conception and community involvement phases, while enhancing my understanding of my own design process
- contribute to modern urban design theory by exploring applications of landscape urbanism in a lower density urban environment
- explore options for ecologically and economically sustainable city growth and development within the river corridor
- explore methods for catalyzing urban development while focusing its trajectory
- explore the economic and social implications that a renewal project of this type can have to the City of Salina
- explore riparian-sensitive design alternatives and develop a further understanding for hydrological systems

Friends of the River Committees

goals + objectives

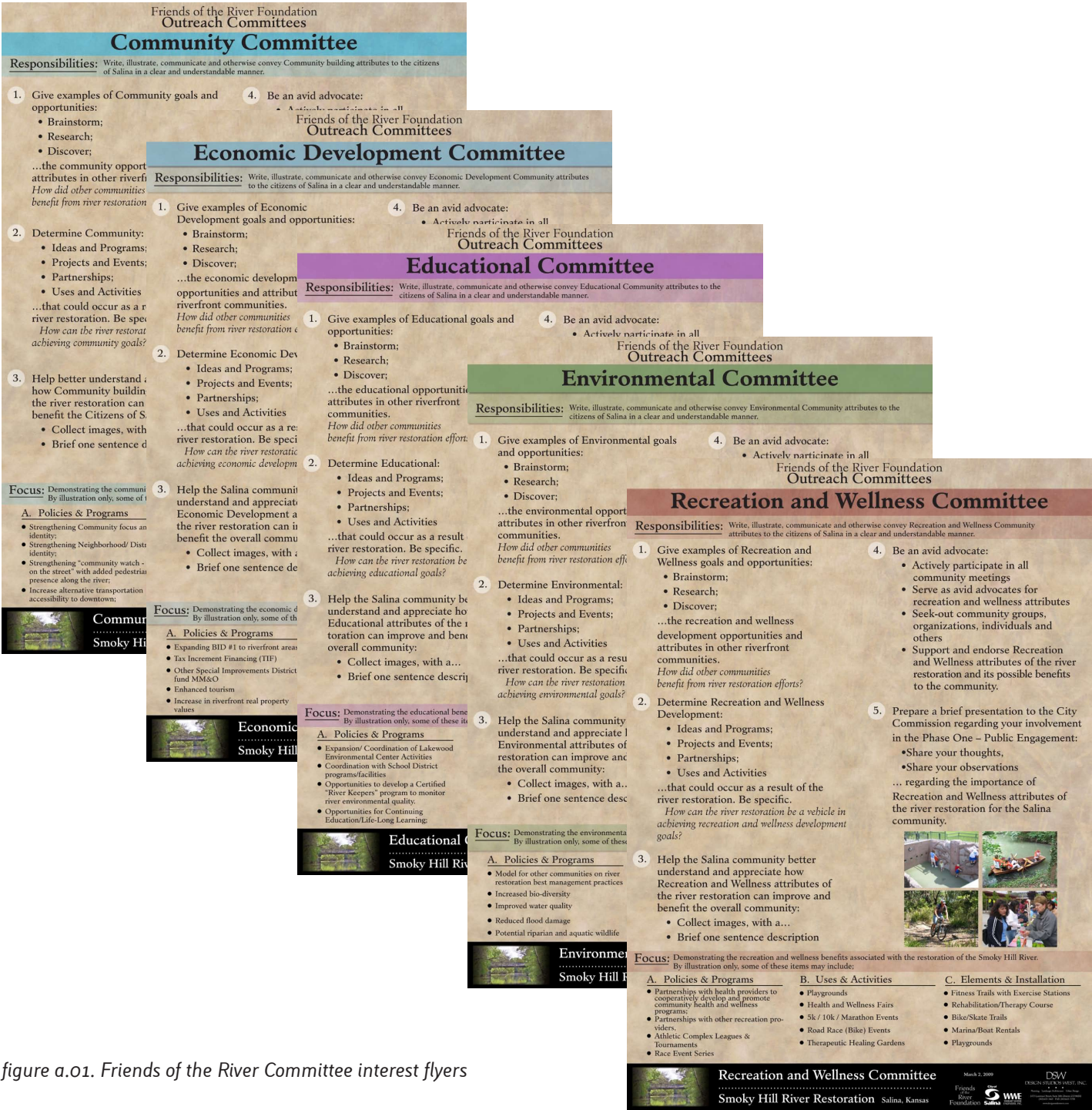


figure a.01. Friends of the River Committee interest flyers

recreation and wellness

goals + objectives

1. Provide a variety of Recreational and Wellness opportunities for people of all ages, abilities, economic, social, and ethnic backgrounds;
 - Provide Recreation and Wellness opportunities along the river that promote socially diverse community activity as well as a range of age group and interest-oriented activity areas/facilities;
 - Work cooperatively with existing Recreation and Wellness providers to support and strengthen the mission-focus of those providers while promoting new facilities and providers to offer expanded recreation and wellness opportunities;
2. Connect people, parks, and other Recreation and Wellness venues of the city;
 - Provide a continuous Open Space and trail corridor along the river with direct access from adjacent parks, neighborhoods and other facilities;
 - Strengthen the physical and program connections between the river and the Salina Regional Health Center;
3. Promote expanded Recreation and Wellness opportunities for the citizens of Salina.
 - Reintroduce water-based Recreation to the river, such as fishing, paddleboats and canoes;
 - Develop linear Recreation and Wellness facilities, such as multiple use and dedicated trails for walking, running, biking, skating and exercise station fitness courses;
 - Develop Recreation and Wellness facility nodes, such as rehabilitation therapy courses, playgrounds, skate parks, horse shoe/shuffleboard courts and other active recreation complexes.

environmental

goals + objectives

1. Eliminate pollutants introduced through storm water runoff.
 - Establish a baseline study of water quality and initiate a continuous monitoring program.
 - Educate citizens regarding methods to reduce nonpoint source water pollution.
 - Demonstrate the ability of riparian areas and wetlands to filter pollutants from storm water and river water
2. Partner with the City of Salina to promote public awareness of water supply and use.
 - Establish a means of communicating to citizens both past and current flows through the old Smoky Hill River and its relationship to public water supply.
 - Provide educational materials and instruction regarding water conservation practices.
 - Develop sites along the riverbank to demonstrate water conservation practices.
3. Eliminate the erosion of the old Smoky Hill River channel.
 - Reconstruct the physical channel to better represent the old channel prior to diversion.
 - Restore self-sustaining native riparian and wetland plant communities lost to erosion.
 - Provide hands on opportunities for citizens who want to be involved in the restoration project.
4. Increase the capacity of the old Smoky Hill River to improve its ability to mitigate a 100-year flood event.
 - Increase the original channel flood capacity by redirecting flow, removing silt, clearing invasive vegetation, and increasing velocity.

community

goals + objectives

1. Reinvigorate our relationship to the river to create a:
 - Better understanding of our roots
 - Affordable source of recreation and culture
 - Accessible resource that belongs to all Salinians
2. Revitalize the historic heart of the Community to help:
 - Create a shared sense of place – “This is who we are and where we live”
 - Reconnect with our heritage – “This is where we come from”
 - Strengthen community pride and identity
3. Reconnect diverse neighborhoods to help:
 - Build a sense of unity in the Community while celebrating our diversity
 - Create economically stable neighborhoods
 - Stimulate stronger neighborhood identities
4. Realize social, cultural and recreational activities enhanced by the River’s revitalization to help:
 - Connect resources along the river like our parks, arts organizations and other facilities with each other and with the community
 - Create opportunities;
 - for exercise and recreation
 - for gathering together
 - to experience joy and pleasure through features and facilities such as jogging trails, boat docks, amphitheaters, fountains and waterfalls
 - Create a beautiful space for the entire community through attention to the:

- natural aesthetic of the river and the flora and fauna around it;
- aesthetic of the built environment along and near the river;
- through attention to the entire river channel loop

educational

goals + objectives

1. Include an education component in every aspect of the Smoky Hill River Renewal project;
 - Provide Educational opportunities along the river that accommodate youth instruction, family group learning experiences and continuing education/life-long learning;
 - Provide Educational opportunity areas along the river, including outdoor classrooms, learning laboratories, and primitive trails/observation areas for individual exploration;
 - Incorporate and communicate specific techniques that are environmentally beneficial to the river renewal in the design and construction of river improvements;
2. Encourage identification of river-related issues and creating programs to raise awareness of and appreciation for the river;
 - Identify environmental issues and Educational programs for topics such as water quality, aquatic/wildlife habitat, native wetland/terrestrial plants, erosion and siltation;
 - Identify community issues and Educational programs for topics such as community water supply and treatment, sanitary sewage treatment, storm water quality, flooding and floodplain;
 - Work with allied Educational organizations/institutions to integrate river renewal activities and facilities with standard curricula.
3. Inform and educate local citizens and visitors about the many ways the river affects our community.
 - Develop self-guided interpretive installations along

the river to describe notable physical, biological, cultural and historic site conditions along the river;

- Develop Educational brochures/newsletters/website articles that communicate cause/effect relationships of river conditions and the purpose of river improvement installations.

economic development

goals + objectives

- Goal: To encourage public and private renewal and new development that will create an amenity migration to places where people want to work, to live and to visit.
1. To improve the Smoky Hill River as an economic catalyst for public and private development that will benefit the entire community.
 - Decrease the size of the flood plain to reduce flood insurance requirement.
 - Increase a source of water supply (quality).
 - Improve storm water capacity.
 2. To enhance our quality of life with revitalization of the seven miles of river channel in the project area.
 - Give back the vitality (legacy) of this area.
 - Reestablish the River as a means of building community character.
 - Stabilize and enhance the property tax base of the area with added value for the long term economic benefit of the entire community.
 3. To use the Smoky Hill River revitalization as a stimulus for renewal and new development.
 - Create retail business areas fronting the river including restaurants and cafes.
 - Plan for adjoining riverside residential zones from single family through apartments and condominiums.
 - Develop a north side Business Office Park to include light industrial enterprises.
 - Construct by segments the entire Smoky Hill River Trail project with access to the water and boating opportunities.
 - Build a riverside stage in either Oakdale Park or

Founders Park.

- Consider the development of a riverside convention hotel in Kenwood Park.
- Develop a riverside Smoky Hill Museum annex could include a flour milling institute, an agricultural tourism center or a Kansas Culinary Institute.
- Establish an open air Festival Market that could be used for farmers market and other entertainment.

appendix b

glossary

BMP – Best Management Practice, used in reference to stormwater management. In the realm of landscape architecture, this entails designed systems that reduce pollutants from stormwater runoff and/or control the quantity of stormwater flow and discharge.

brownfield – “property [that], the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands” (US EPA).

catalyst – “A substance that increases the rate of a reaction... the process is called catalysis. The catalyst is both a reactant and product of the reaction...The term catalysis is also often used when the substance is consumed in the reaction. Strictly, such a substance should be called an activator “(IPAC 2006).

catalyze – “the action of a catalyst” (IPAC 2006).

charged site

charged – 1e): to fill or furnish fully; f): electrify; 2a): to impose a task or responsibility on

site – 1a): the spatial location of an actual or planned structure or set of structures (as a building, town, or monuments);b): a space of ground occupied or to be occupied by a building

a charged site, therefore, is identified as being “electrified” or filled with programmatic potential, be it imposed or inherent

(Merriam-Webster Online, 2009)

Central Park Effect – the phenomenon describing the ability for parks and green spaces to exude influence over adjacent land, communities, industry, economy, and other social institutions. The term originates from New York City’s Central Park, which has empirically acted to attract industry and enterprise, enhance property values, generate tax revenue, and provide the community with a valuable recreational, educational, and cultural outlet (Appleseed 2009)

diversion channel – the channel constructed as a part of the 1951 Smoky Hill River flood control project. Also referred to as the Iron Street Cutoff, this waterway has become technically become the true Smoky Hill River in terms of water discharge and primary flow.

Drosscape – “Drosscapes are the inevitable wasted landscapes within urbanized areas that eternally elude the overly controlled parameters and the scripted programming elements that designers are charged with creating and accommodating in their projects...Dross emerges out of two primary processes: first, as a consequence of current rapid horizontal urbanization (or what some refer to as urban “sprawl”), and second, as the leftovers of previous economic and production regimes, which are both catalyzed by the drastic decrease in transportation costs (for goods and people) over the past century” (Berger 2006).

folding – “Sectional joining and definition varies as the program demands.” Through thinking of the urban surface as foldable in terms of space and use, “the flows of people and goods combine in newly visible ways, as traditional zonal separations become more fluid and interactive” (Wall 1999, 287).

Friends of the River – an advocacy group for restoring the historic channel of the Smoky Hill, founded in spring of 2008 by concerned Salinians.

historic channel – the cutoff channel loop of the Smoky Hill that ran into the middle of Salina before flowing northwestward. Its current state is the product of the Iron Street diversion channel which significantly reduces its flow.

landscape as a prime organizing force – “...processes of urbanization...are much more significant for the shaping of urban relationships than are spatial forms per se. Consequently, he [urban geographer David Harvey] argues that the search for new organizing structures ought to derive from a Utopia of process rather than a Utopia of form...An argument for process ought to recognize the profound effects form , space and materials exercise upon the world...Thus, whereas practices of design and planning concerned with time and process are fundamentally material practices, landscape urbanism emphatically puts these materials to ‘work’” Corner(Mostafavi 2004).

landscape infrastructure/surface – “Landscape urbanism implants new potential in a given field through the orchestration of infrastructural catalysts – infrastructures that perform and produce, or ‘exfoliate’ effects. In traditional landscape terms, such infrastructures might include earthwork grading, drainage, soil cultivation, vegetation establishment techniques, land management and so on – the preparatory substrate that conditions ground for subsequent uses. In traditional urban planning terms, infrastructures might include roads, utilities, bridges, subways and airports – the hidden systems that not only support but also instigate development. Codes, regulations and policies may also form part of the infrastructural milieu, as may many of the hidden forces, directions and regimes that work to shape development over time” Corner(Mostafavi 2004).

landscape urbanism – “Landscape Urbanism describes a disciplinary realignment currently underway in which landscape replaces architecture as the basic building block of contemporary urbanism. For many, across a range of disciplines, landscape has become both the lens through which the contemporary city is represented and the medium through which it is constructed” (Waldheim 2006).

mat urbanism – the concept of the thickening of building and landscape programmatic function to better integrate with its contexts; in many ways it is the architectural-centric version of the concepts in landscape urbanism. “The lessons of mat building in general...have been internalized as a series of architectural objectives: a shallow but dense section, activated by ramps and double-height voids; the unifying capacity of the large open roof; a site strategy that lets the city flow through the project; a delicate interplay of repetition and variation; the incorporation of time as an active variable in urban architecture...in mat building, functions and events configure space, rather than the architectural frame, which remains relatively neutral” (Allen 2002, 118-126).

multi-layered surface – “...the emphasis now shifts from the one to the many, from objects to fields, from singularities to open-ended networks. Horizontality maximizes opportunities for roaming, connecting, interrelating, assembling and moving – all while allowing differences to come into being and proliferate...for

the surface is the organizational substrate that collects, distributes and condenses all the forces operating on it” Corner(Mostafavi 2004).

non-programmed use – “Equipping of the surface with services and furnishings that can be appropriated and modified by the public enables a diverse and flexible range of uses.” This allows evolution of activity according to changes in human needs and desires over time (Wall 1999, 287).

organic urbanism – “In conceptualizing a more organic, fluid urbanism, ecology itself becomes an extremely useful lens through which to analyze and project alternative urban futures...dynamic relationships and agencies of process become highlighted in ecological thinking, accounting for a particular spatial form as merely a provisional state of matter, on its way to becoming something else” (Corner 2006, 021).

phasing/evolution – “Landscape Urbanism is uniquely equipped to address urban scale development as a phased landscape process rather than a realized built product” (Waldheim 2002, 10-17)”

reagent – see reactant

reactant – “A substance that is consumed in the course of a chemical reaction. It is sometimes known, especially in the older literature, as a reagent, but this term is better used in a more specialized sense as a test substance that is added to a system in order to bring about a reaction or to see whether a reaction occurs” (IPAC 2006).

riparian vegetal massings – groupings of plants along a river corridor. The term “massing” suggests a more natural grouping. Vegetation can consist of wetland grasses, forbs, shrubs, and trees.

spatio-material practice – “the concept of landscape urbanism suggests a more promising, more radical, and more creative form of practice than that defined by rigid disciplinary categorizations...the very complexity of the metabolism that drives the contemporary metropolis demands a conflation of professional and institutionalized distinctions into a new synthetic art...able to bridge scale and scope with critical insight and imaginative depth” (Corner 2006, 021).

surface strategies – “instruments, or agents, for unfolding new urban realities, designed not so much for appearances and aesthetics as for their instigative and structuring potential...targeted not only towards physical but also social and cultural transformations, functioning as social and ecological agents” (Wall 1999, 287).

temporality – “The temporality of landscapes renders them forever incomplete, and this incompleteness can be seen as an antidote to the implicit finitude of zoning” (Mostafavi 2004).

thickening – Stacking and combining space use physically and programmatically to allow for more flexibility. The multilevel surface “effectively multiplies the number of public ground-planes” and is “continuous, multiple, and dynamic” (Wall 1999, 287).

urban sprawl – “Sprawl is a pattern and pace of land development in which the rate of land consumed for urban purposes exceeds the rate of population growth and which results in an inefficient and consumptive use of land and its associated resources. The Sierra Club describes suburban sprawl as irresponsible, often poorly-planned development that destroys green space, increases traffic and air pollution, crowds schools and drives up taxes. Tamer descriptions of sprawl include low-density urbanization and discontinuous development. Sprawl must be considered in a space-time context. It is not simply the increase of urban lands in a given area, but the rate of its increase relative to population growth. Sprawl occurs when the rate of land conversion and consumption for urban uses exceeds the rate of population growth for a given area over a specified period of time” (CGIS at Towson University 2009).

urban framework – “they operate as fieldlike assemblages, condensing and redirecting the patterns of urban life, and establishing extended webs of connectivity both internally and externally” (Allen 2002, 118-126).

Essentially urban frameworks are the systems, concrete or perceived, that influence urban activity. Roadways, as concrete frameworks, influence transportation. Zoning, as a perceived framework, influences land development.

urban surface/fabric – “the urban field when considered across a wide range of scales, from the sidewalk to the street to the entire infrastructural matrix of urban surfaces... surface understood as urban infrastructure” (Corner 2006, 021).

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